DOCUMENT RESUME

ED 281 733 SE 047 927

AUTHOR Mickunas, Lynn
TITLE Kalculator Kids. Programmed Learning Activities Using the Calculator as a Springboard for Better Math Comprehension.
REPORT NO ISBN-0-86653-076-2
PUB DATE 82
NOTE 68p.
AVAILABLE FROM Good Apple, Inc., P.O. Box 299, Carthage, IL 62321-0299 ($5.95; GA410).
PUB TYPE Guides - Classroom Use - Materials (For Learner) (051)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Calculators; Computation; Elementary Education; *Elementary School Mathematics; Instructional Materials; Intermediate Grades; *Learning Activities; *Mathematics Instruction; Number Concepts; *Problem Solving; *Workbooks

ABSTRACT

The focus of this activities book is on using calculators to solve problems, as a way of promoting better comprehension in mathematics in the intermediate grades. Problems of various types are presented, ranging from those based on everyday life such as shopping, schedules, meal planning, and sports, to those involving imaginary ideas. Instructions on how to use the calculator for needed operations are interspersed. (MNS)

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A Good Apple Activity Book for Intermediate Grades

GOOD GA APPLE

KALCULATOR KIDS

Programmed Learning Activities Using the Calculator as a Springboard for Better Math Comprehension

By
Lynn Mickunas

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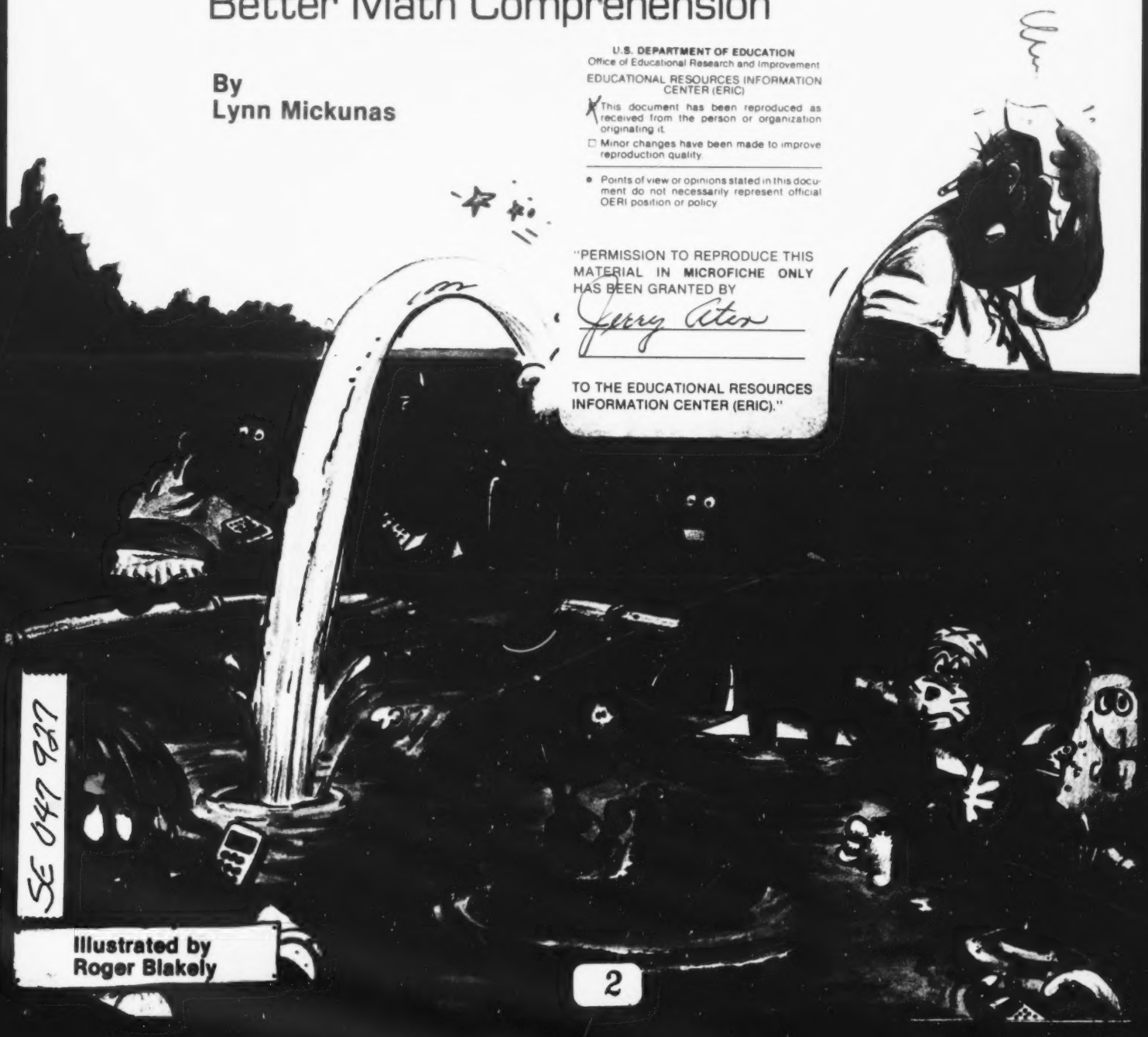

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Illustrated by
Roger Blakely

KALCULATOR KIDS

by
Lynn Mickunas

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Cover by Mark Dittmar

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ISBN No. 0-86653-076-2

Printing No. 9876543

GOOD APPLE, INC.
BOX 299
CARTHAGE, IL 62321-0299

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Acknowledgements

My deepest thanks to my patient, positive and helpful husband Denny, to Roger, Judy, Margie, Mary Ellen, Carmen, Jean, Jan, Shirley, Cesaria, Margaret, Ruby, Paula, Mike, Mitch, Cecil, Don, and Kermit for all reasons I'm sure they know.

Dedicated to Courtney, my toddler, who shares her mommy and for whom I try to make the world a little better by teaching children.

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Note: Subjects marked (*) involve "spelling" with the calculator.

INTRODUCTION

Kalculator Kids is a mini-sample of a program I've been developing, redesigning and using with children in the intermediate grades for over eight years. *K-Kids* was created as a possible technique to teach what I call "math comprehension." The gap between the ability to compute problems and the ability to apply the appropriate functions was horrendous. Furthermore, careless errors in computation increased the frustration and feeling of failure my students had when solving "story problems." I surveyed both the available "thinking skills" pages and the practice story problems pages in texts and came to two conclusions. Our students can compute but they have little opportunity to learn to think and apply math to meaningful situations. Secondly, available materials are not relevant or interesting for our students. I hope you will find, as I did that once exposed to a variety of math comprehension situations as found in *K-Kids*, you and your students will find there are endless possibilities for math comprehension and it's fun!

The calculator when used as a tool and *not a substitute* for computation will free the student to spend more time thinking and less time writing. Over a dozen teachers and several hundred students have tried the *K-Kids* approach as a springboard for math comprehenision. May calculators and confidence be a part of your students' world.

Sincerely,

Getting to Know Your Calculator

Every modern electronic calculator has an ON/OFF switch plus at least 18 separate keys. To begin with, there are 10 digit keys, usually arranged as shown here.

Pressing any one of the digit keys causes that numeral to appear in the rightmost position of the display. If there is already a number showing on the display, then it is automatically shifted to the left to make room for the new numeral.

Therefore, any number may be displayed by reading the individual digits of the number, from left to right, and by pressing the corresponding digit keys in that same order. To see this, let's look at some examples.

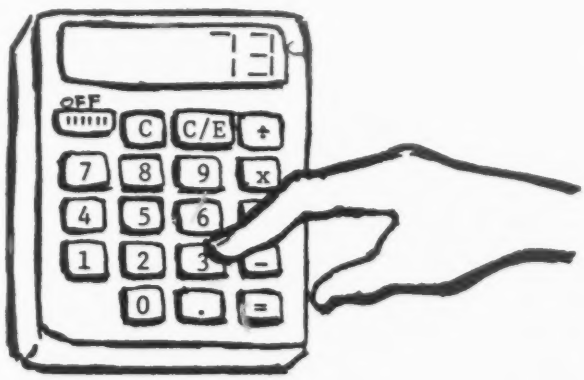
Example: Display the number 73.

1. Press the 1st digit.

   [7] 3

2. Press the 2nd digit.

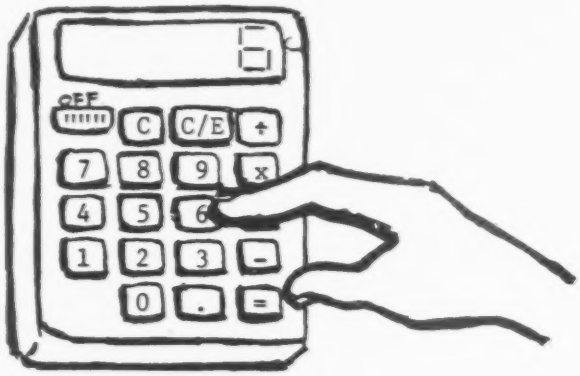
   7 [3]



Another Example: Display the number 6880.

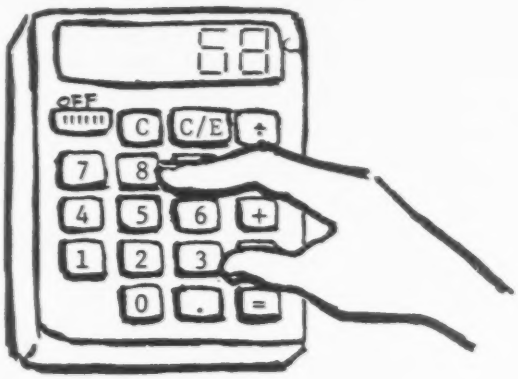
1. Press the 1st digit.

[6] 8 8 0



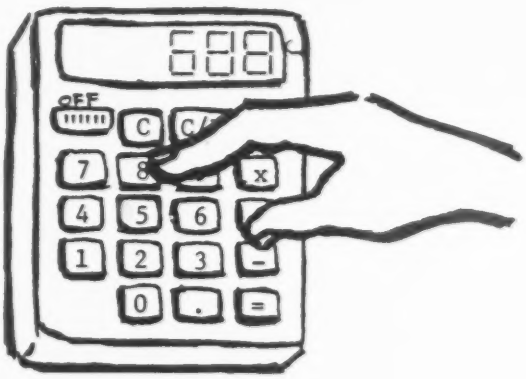
2. Press the 2nd digit.

6 [8] 8 0



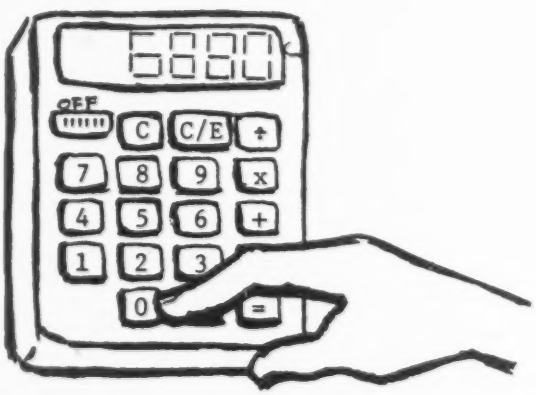
3. Press the 3rd digit.

6 8 [8] 0



4. Press the 4th digit

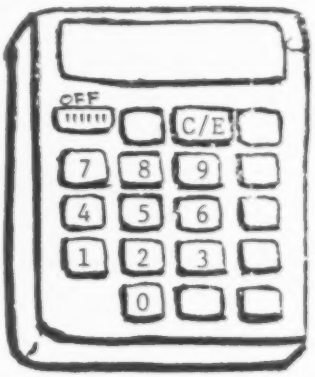
6 8 8 [0]



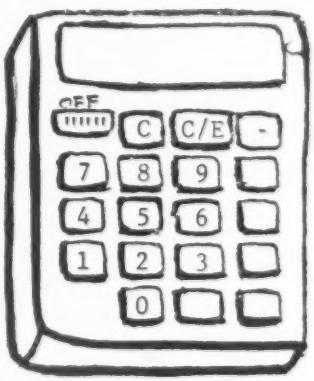
Displaying a number in this way is also the way that a number is entered into the calculator. A number must be entered before it can be used in any calculations.

You can always tell which number (or which part of a number) has just been entered, since that number is what appears on the display.

In case you make a mistake when entering a number, you can erase it from the display and start over by pressing the clear entry key. This key is usually marked CE or C/E and is situated in a variety of positions, depending upon the brand of your calculator. We'll show it just above the 9 digit key, as shown here.



There is another key on most calculators, marked C. This is the clear key and should not be confused with the C/E key. The C key erases the display (like the C/E key), but it also wipes out any previous numbers and operations. The C key is used when you want to wipe out everything and start over. It is a good idea to press the C key whenever you start a new calculation. We'll show the C key just above the 8 digit key as shown here.



Adding and Subtracting on the Calculator

In order to add two numbers, simply

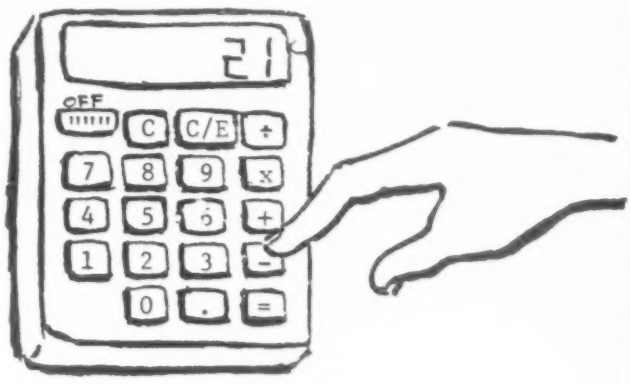
1. ENTER the first number as previously described, then
2. press the "+" key, then
3. ENTER the second number, then
4. press the "=" key.

The sum will then appear in the display.

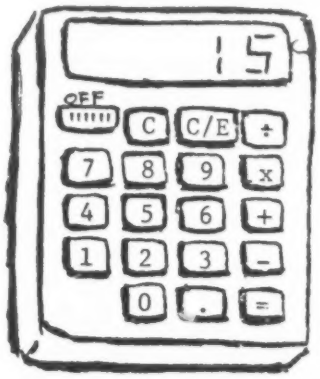
Subtraction is performed in exactly the same way, except that you press the "−" key instead of the "+" key. Example: Compute 21 − 15.

1. ENTER "21"

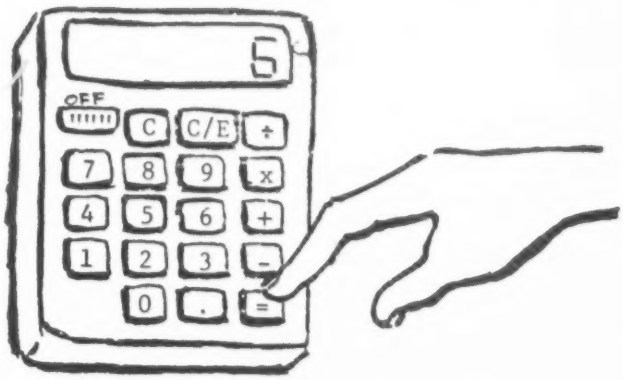
2. Press "−"



3. ENTER "15"



4. Press "="



**Note to Teachers. On some calculators, a single key is used for both + and =. The above instructions still apply: press the "+" key whenever you want "+"; press the same "+ =" key whenever you want "=."

TRY IT!

Addition

497 +865	5073 +3984	3982 +6051	83,455 +79,846	395,647 +808,596
586 +393	7432 +689	8974 +9090	63,722 +86,398	411,414 +793,687

Subtraction

345 −87	976 −297	5041 −666	21,342 −19,774	810,625 −532,907
682 −586	740 −69	1955 −976	48,064 −38,235	509,743 −286,976

Mixed

3962 +8709	57,836 −28,097	823,651 −297,308	416,258 +704,635	900,001 −634,208

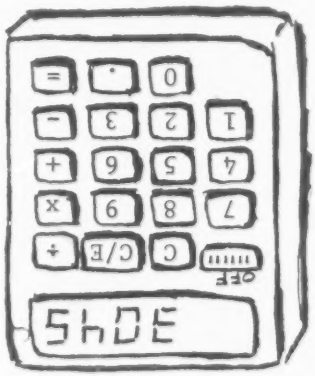
"Spelling" on the Calculator

This section is designed to insure the student both fun and familiarity with his/her calculator. Confidence and success with a calculator are often dependent upon a student's ability to properly use the calculator which necessitates practice making correct entries.

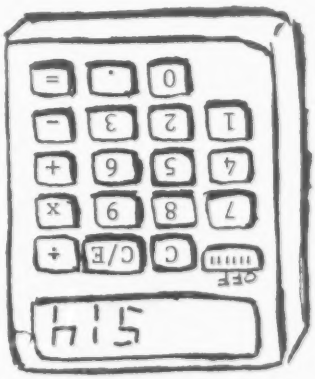
Kalculator Kodes is a self-checking system for the most part because the answer shown on the display "spells" a word. The numbers, when viewed upside down on the display, become "letters." In the following conversion chart, the top line shows the digit and the bottom line shows the "letter" that it "spells" when viewed upside down.

1	2	3	4	5	6	7	8	9	0
I	Z	E	h	S		L	B	G	O

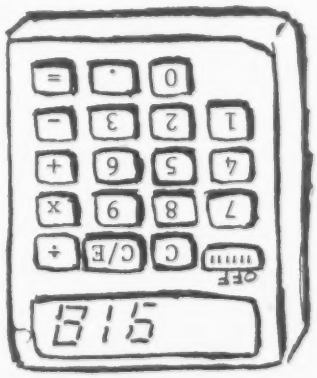
Example 1. Enter the number "3045." Turn the calculator around so you can read the numbers on the display upside down. You have just "spelled" the word "ShOE."



Example 2. Enter the number "514." Turn and read the word "hIS."

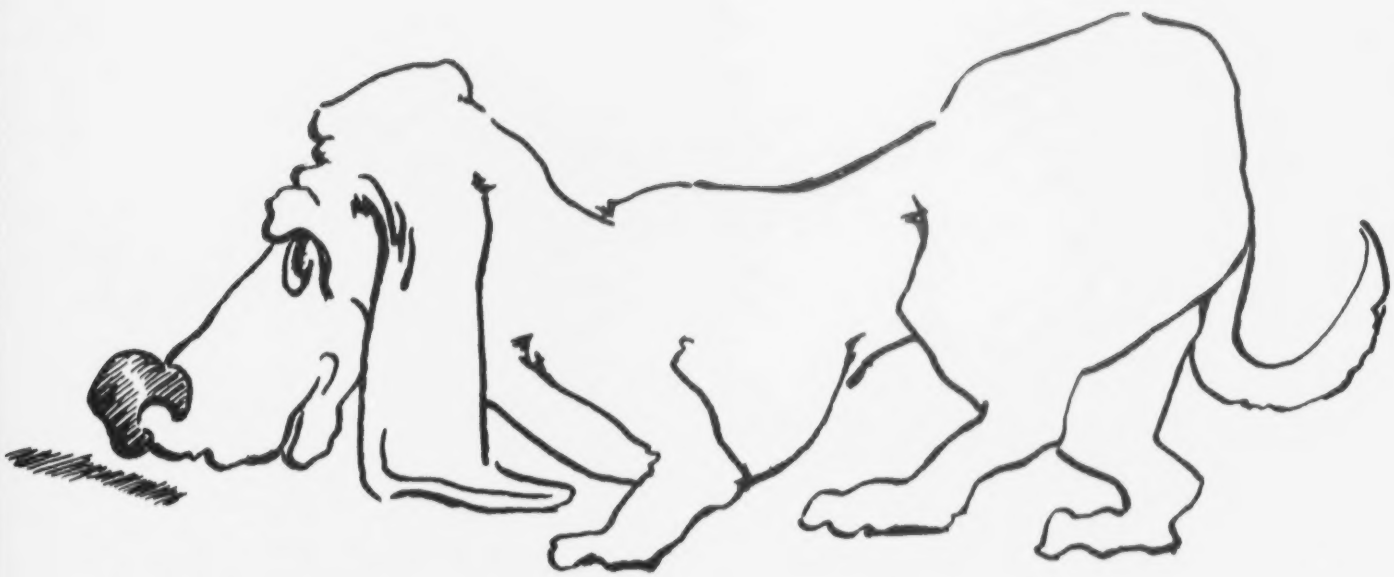


Example 3. If nine skaters circled the rink 102 times each for a contribution of one dollar each time, their total contribution would be _____.
(9 × 102 = 918 or BIG)



KALCULATOR KODES

217 +297	2.05 −1.97	8912 −1177	111 +234	.60 +.33
6071 −1069	2515 +2999	456 +481	2013 +1738	5472 +2242
40,000 −4993	34,809 +2929	50,400 −12,321	31,134 +1001	23,698 +31,381
33,333 +2006	500,000 −8625	543,210 −163,291	7,654,321 −3,872,384	29,564 +5445



SCHOOL DAYS

PENCILS	2/$.25
PAPER	.65
PENS	1.35
NOTEBOOKS	1.95
FOLDERS	.35
LUNCH TICKETS	.75
BOOK RENTAL	13.00

Miss E. Ficient, the secretary, was 83 years old but was faster than most of the 10-year-olds when getting out of the building at the end of the day. She could quickly tabulate the lunch counts, the book rental totals, the attendance, and the supply money to the penny. With the information available on these pages, how well can you do?

1. Total students present _____
2. Total students absent _____
3. Hot lunch count _____
4. Total lunch money _____
5. Total book rental money _____
6. Total supply money _____

Supplies	
Pencils	14.00
Paper	27.30
Pens	35.10
Notebooks	23.40
Folders	15.40

*Note to the teacher: These same sheets can be used when practicing multiplication, division, and percentages. You may want to create your own problems using facts collected from your school. The results may also be graphed.

Teacher -- Miss Fortune	
Grade	4
Students present	25
Students absent	2
Hot lunch count	20
Total lunch money	$15.00
Total book rental	$325.00

Teacher -- Mrs. White	
Grade	4-5
Students present	28
Students absent	0
Hot lunch count	23
Total lunch money	$17.25
Total book rental	$351.00

Teacher -- Ms. Wonder	
Grade	5
Students present	26
Students absent	1
Hot lunch count	21
Total lunch money	$15.75
Total book rental	$312.00

Teacher -- Mrs. Stone	
Grade	6
Students present	29
Students absent	3
Hot lunch count	28
Total lunch money	$21.00
Total book rental	$390.00

Teacher -- Mrs. George	
Grade	7
Students present	27
Students absent	7
Hot lunch count	22
Total lunch money	$16.50
Total book rental	$364.00

Teacher -- Miss Stake	
Grade	8
Students present	30
Students absent	3
Hot lunch count	19
Total lunch money	$14.25
Total book rental	$338.00

Tabulating Twenty

A	B	C	D	E
41.43	7.50	1.12	10.43	20.91
1.84	1.36	31.20	6.15	40.89
27.00	15.76	1.10	35.52	2.85
1.49	.59	33.67	1.94	5.59
20.72	3.75	.56	5.22	10.49
.92	.63	15.60	3.08	20.45
13.50	7.88	.55	17.76	1.43
.75	1.18	16.84	.97	2.79
41.31	3.68	.68	52.40	12.29
81.79	54.00	31.52	.55	71.04
5.69	2.97	1.18	67.34	.97
11.17	82.85	15.99	2.24	20.86
13.10	1.22	.22	17.13	4.09
27.26	18.00	10.17	.18	22.01
13.14	.28	9.90	4.72	8.53
34.87	2.37	6.10	6.32	14.59
34.68	3.90	1.31	.59	7.38
7.93	38.18	73.38	.58	4.28
5.93	.28	7.13	24.42	53.54
39.34	5.82	3.58	11.57	.59

**Note to the teacher: These strips may be used as practice or students may bring in sales slips. Accuracy and speed increase with frequent practice.

Fill in the Bus Schedule.

Northbound

Main	State	Green	Vine
7:02	7:11	7:26	7:44
7:43	7:50	8:03	8:19
8:23	8:30	8:43	8:59
9:23	9:30	9:43	9:59
10:53	11:00	11:13	11:29

Southbound

Vine	Green	State	Main
7:44			

Eastbound

Kneale	Church	Green	Market
6:18	6:25	6:31	6:40
6:47	6:54	7:00	7:09
7:08	7:17	7:24	7:35
8:00	8:08	8:15	8:25
9:21	9:29	9:36	9:46

Westbound

Market	Green	Church	Kneale
6:40			

Try your own.

around town

Multiplying and Dividing on the Calculator

Multiplication and division are performed in the same way that addition and subtraction are. For multiplication,

1. ENTER the multiplicand, then
2. Press the "×" key, then
3. ENTER the multiplier, then
4. Press the "=" key.

The product will then appear in the DISPLAY.

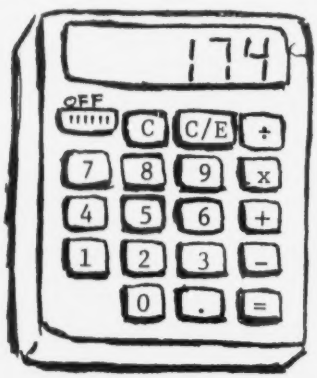
For division,

1. ENTER the dividend, then
2. Press the "÷" key, then
3. ENTER the divisor, then
4. Press the "=" key.

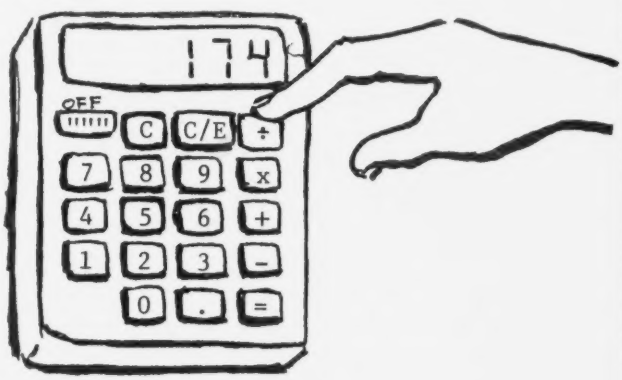
The quotient will then appear in the display. Note that if the divisor does not evenly divide the dividend, then the quotient will appear as a decimal.

Example. Compute $12\overline{)174}$

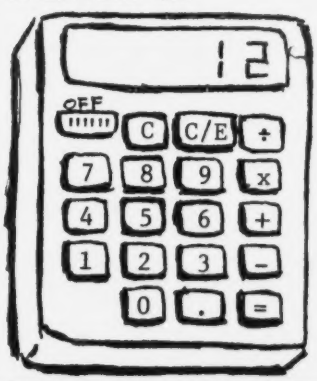
1. ENTER "174"



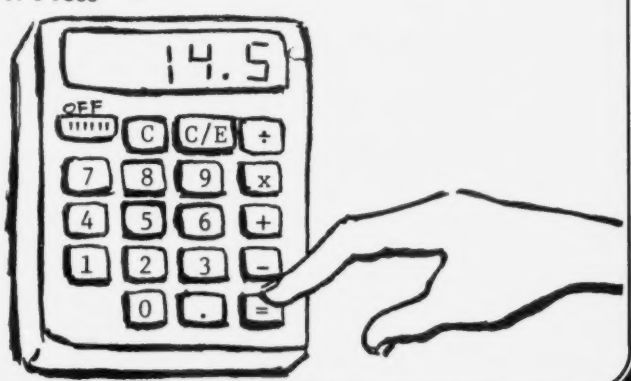
2. Press "÷"



3. ENTER "12"



4. Press "="



TRY IT!

Multiplication

83 ×9	74 ×66	526 ×75	634 ×28	8010 ×34
56 ×8	35 ×77	909 ×56	228 ×39	9257 ×43

Division

$63\overline{)5292}$	$78\overline{)4602}$	$56\overline{)3528}$	$27\overline{)1215}$
$49\overline{)15,729}$	$36\overline{)18,108}$	$91\overline{)8281}$	$85\overline{)22,015}$

Mixed Practice

65 ×98	$58\overline{)57,246}$	$71\overline{)14,484}$	743 ×27

KALCULATOR KALORIES

School Lunch Menu

hamburgers _____
French fries _____
sliced peaches _____
bread and butter _____
milk _____

Party Menu

deluxe pizza _____
potato chips _____
chocolate milk shakes _____
or colas _____

Thanksgiving Menu

roast turkey _____
mashed potatoes _____
buttered peas _____
tossed salad _____
cornbread _____
milk _____

Design Your Own

_____
_____
_____
_____
_____
_____

Suggested Activities

1. Have students calculate the total calories for a month's school lunches.
2. Have children design "sack" lunches which would be nutritious but within a limited caloric range.
3. Have students compare the number of calories in certain foods with the number of grams of carbohydrates.
4. Have students do a "market" survey at the grocery store, at fast food places, and in reference materials. List and compare favorite meals, their nutritional value, and cost.
5. Redesign the school menu after taking a survey of the students and submit it to the lunch program supervisors.

Fruits

apple	1	37
banana	1	114
blueberries	1/2 cup	46
blackberries	1/2 cup	42
dates	4	244
fruit cocktail	1/2 cup	89
grapes	12	35
grapefruit	1/2	47
orange	1	60
peaches(fresh)	1/2 cup	38
peaches (canned)	1/2 cup	96
pear (fresh)	1	101
pears (canned)	1/2 cup	90
pineapple (canned)	1/2 cup	65
plum (fresh)	1	25
plums (canned)	1/2 cup	98
prunes	1/2 cup	148
raisins	1/2 cup	120
raspberries	1/2 cup	47
strawberries	1/2 cup	26
tangerine	1	39

Main Dishes

beans & franks	4 oz.	200
pot roast	4 oz.	358
broiled ground beef	4 oz.	322
steak	4 oz.	425
beef stew	4 oz.	111
fried chicken	4 oz.	275
chicken a la king	4 oz.	250
chicken & dumplings	4 oz.	101
chili	4 oz.	157
chop suey	4 oz.	106
corned beef hash	4 oz.	217
scrambled eggs	2	222
omelet	2 eggs	214
boiled eggs	2	160
enchilada	4 oz.	225
fish fillet	2	208
hot dog	1	354
ham	4 oz.	135
lasagna	4 oz.	96
lobster	4 oz.	104
meat loaf	4 oz.	211
macaroni & cheese	4 oz.	135
pizza (deluxe)	4 oz.	324
ravioli	4 oz.	127
Salisbury steak	4 oz.	121
shrimp	4 oz.	137
spaghetti & meatballs	4 oz.	143
taco	4 oz.	245
tuna & noodles	4 oz.	103
turkey	4 oz.	240

Vegetables

asparagus	4 spears	13
baked beans	1/2 cup	52
green beans	1/2 cup	5
lima beans	1/2 cup	30
beets	1/2 cup	13
peas	1/2 cup	68
cabbage	1/2 cup	21
carrot	1	21
corn	1/2 cup	78
lettuce	1/2 cup	4
mushrooms	1/2 cup	11
onion	1	38
potato (baked)	1	90
potatoes (fried)	1 serving	219
potatoes (mashed)	1/2 cup	93
potatoes (chips)	10 chips	95
salad	1/2 cup	180
radish	1	2
sweet potatoes	1/2 cup	138
tomato	1	33

Breads and Cereals

bread (wheat)	1 slice	63
bread (French)	1 slice	77
bread (rye)	1 slice	64
bread (white)	1 slice	69
granola	1 cup	130
muffin	1	120
cornbread	1 piece	95

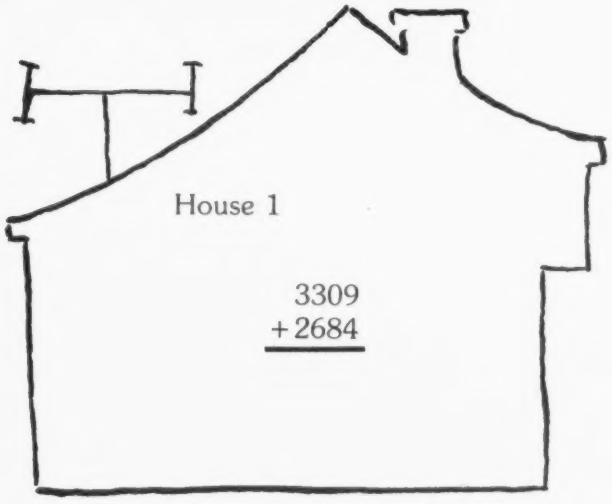
Dairy Products

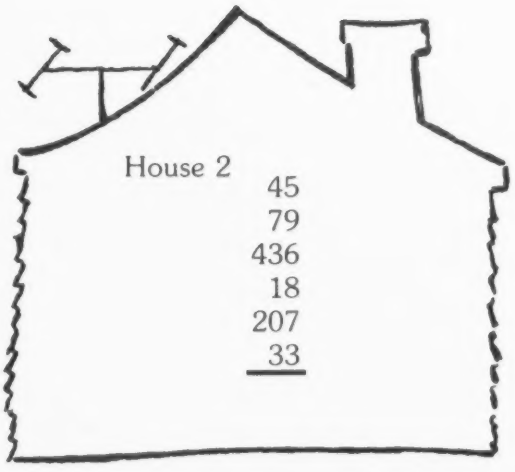
cheese (American)	1 oz.	110
cheese (cottage)	1 oz.	24
cheese (mozzarella)	1 oz.	97
cheese (Parmesan)	1 oz.	128
cheese (ricotta)	1 oz.	44
cheese (Swiss)	1 oz.	102
whipping cream	1 tbsp.	50
sour cream	1 tbsp.	21
ice cream (chocolate)	1 oz.	175
ice cream (sherbet)	1 oz.	135
ice cream (strawberry)	1 oz.	165
milk (whole)	1 cup	150
milk (2%)	1 cup	135
milk (buttermilk)	1 cup	93
milk (chocolate)	1 cup	210
milk shake	1 cup	315
yogurt (plain)	8 oz.	136
yogurt (flavored)	8 oz.	235

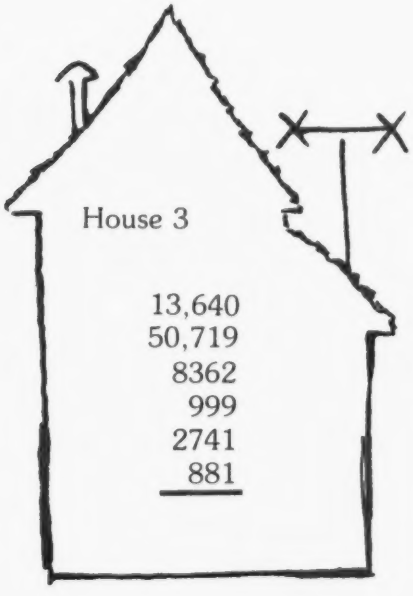
Snacks and Fast Foods

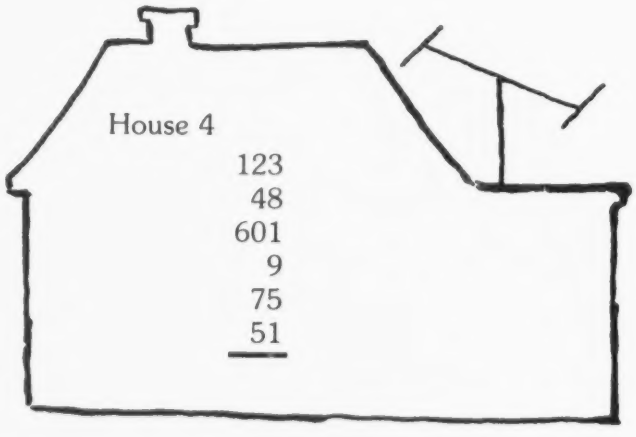
Arby's beef special and shake	1599
McDonald's Big Mac, fries and shake	1055

21





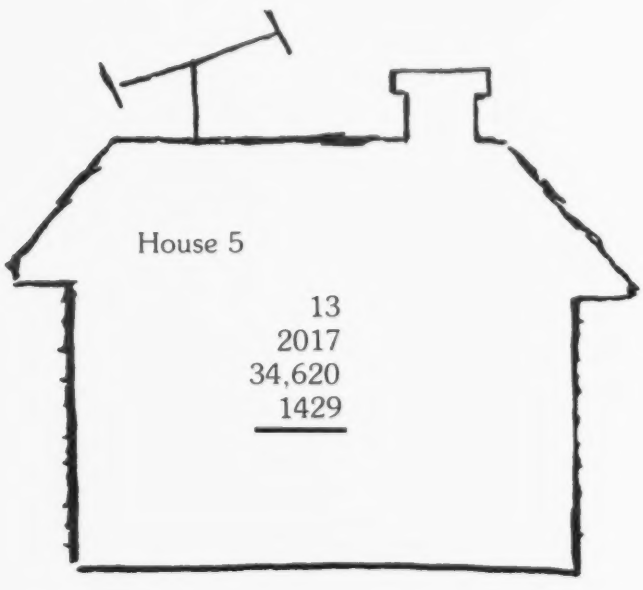




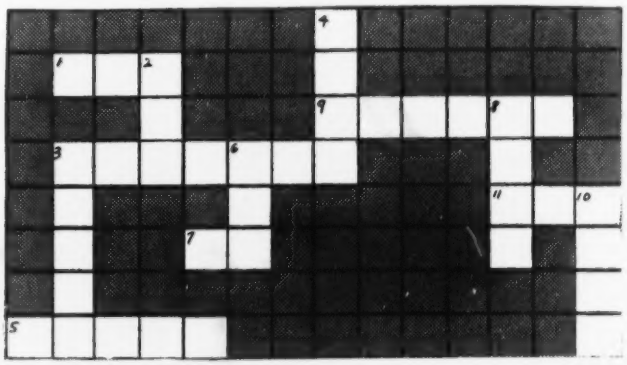
SCAVENGER HUNT

Discover the "kodes" hidden in these houses.

Make up your own hidden "kodes" (using the letters I,Z,E,h,S,L,B,G,O).



KALCULATOR KODE KROSSWORDS



Across

1. Nickname for Robert (9191 - 8383)

3. Something both divers and welders wear (5,400,000 – 20,091)

5. Another way to spell the name Lee (1489 × 33)

7. Land of the yellow brick road (260 ÷ 13)

9. The sound of bacon in a hot pan (4379 × 85)

11. A call for help (7272 – 6767)

Down

2. A marshy area (4540 ÷ 5)

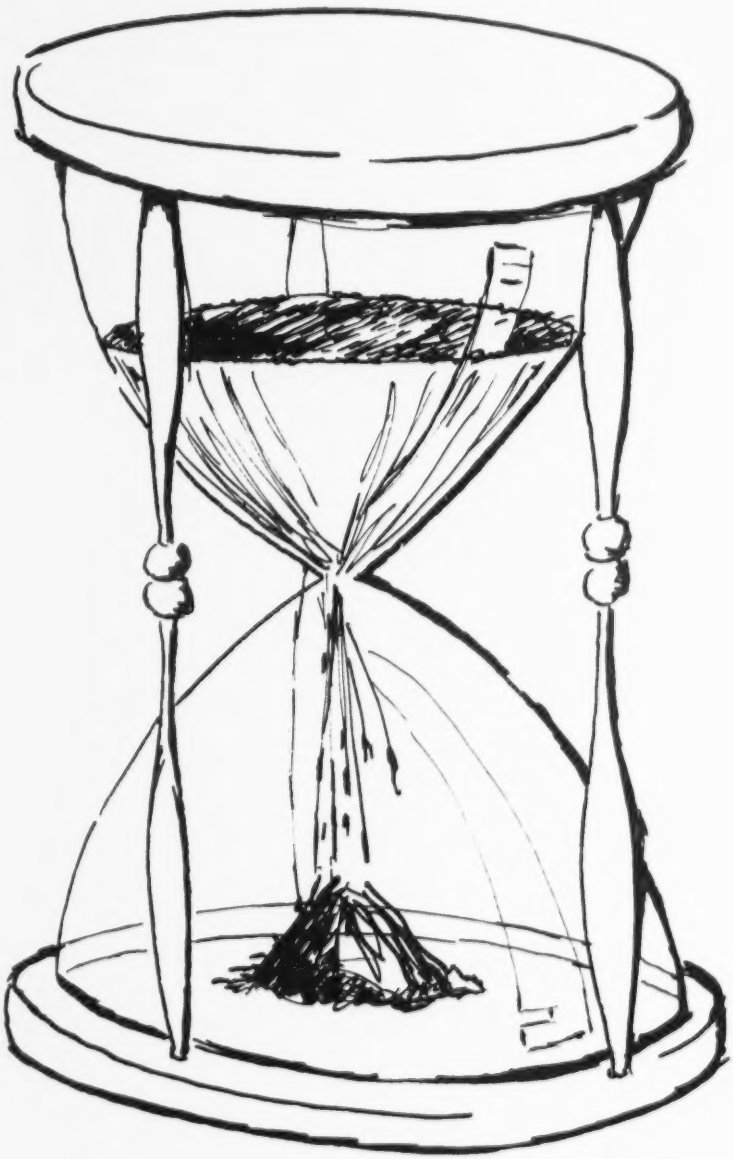
3. A large bird (2693 × 13)

4. Someone in authority (459 × 12)

6. A nickname for Elizabeth (2387 ÷ 11)

8. When you don't win you (2395 + 1112)

10. A good place to grow geraniums (9123 – 1408)



Entering Decimals and Percentages

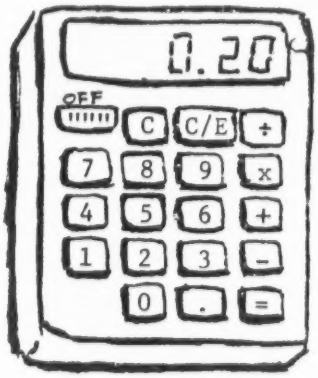
A decimal number is entered in the same way that an integer number is entered, except that you must press the "." key to include the decimal point. For example, to enter "3.7" first press "3"; then press "."; then press "7."

Percentages should be entered as decimals with two digits following the decimal point. For example, to enter "150%" first press "1"; then press "."; then press "5"; then press "0."

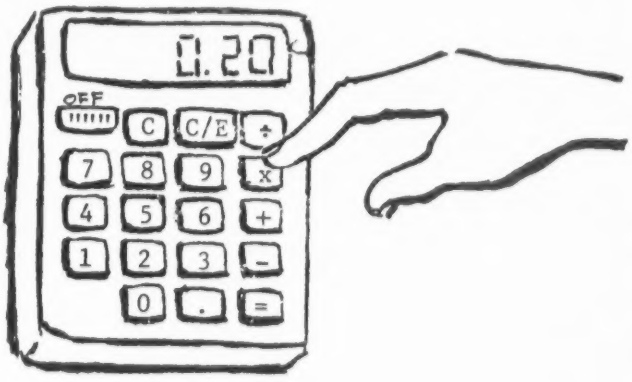
Be careful when entering single-digit percentages. For example, "6%" is entered as "0.06," not "0.6."

Example: Compute 20% of $10.25 (20% × 10.25).

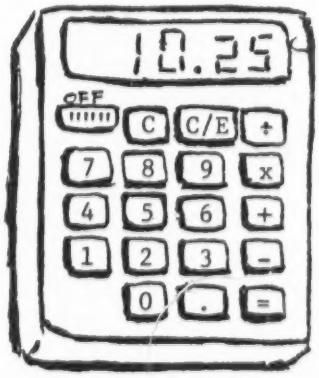
1. ENTER "20%" (i.e. "0.20")



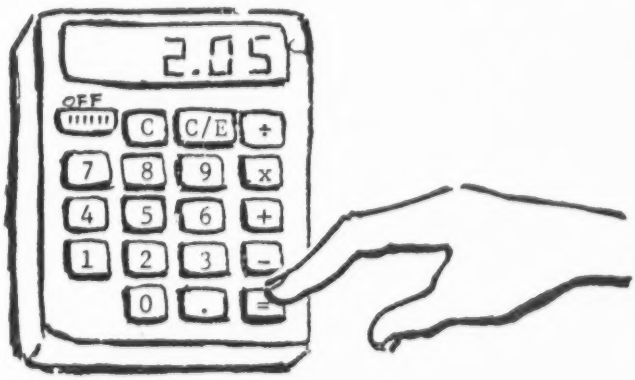
2. Press "×"



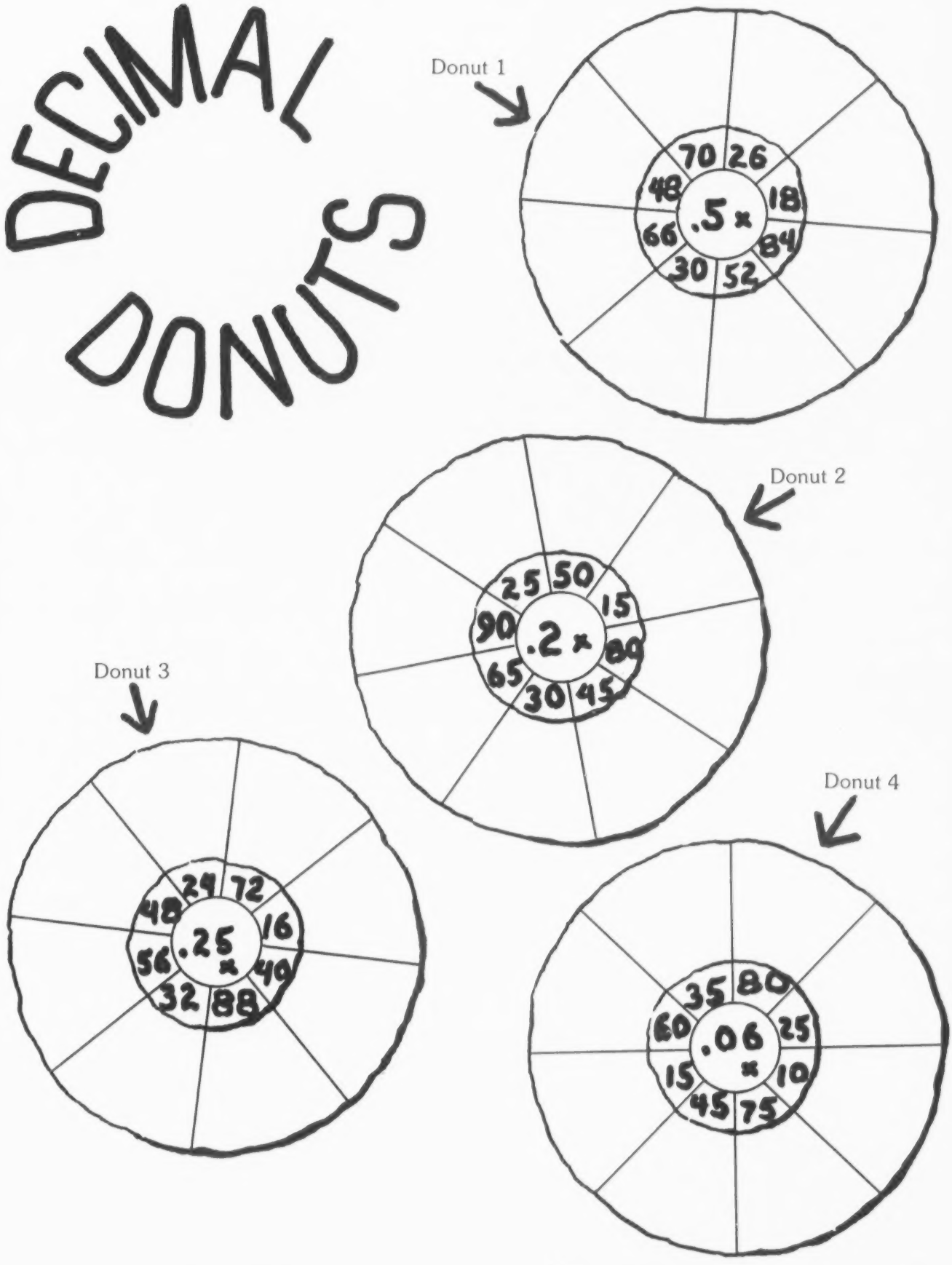
3. ENTER "10.25"



4. Press "="



DECIMAL DONUTS



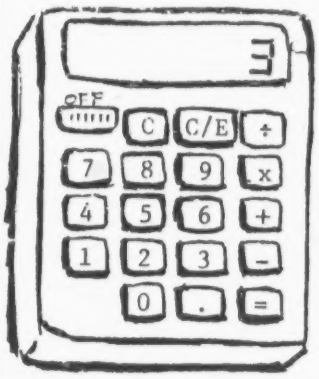
Computing with Fractions

Whenever a computation involves a fraction, it is usually advisable to convert the fraction to a decimal before proceeding. A (nonmixed) fraction is converted to a decimal simply by dividing the numerator by the denominator.

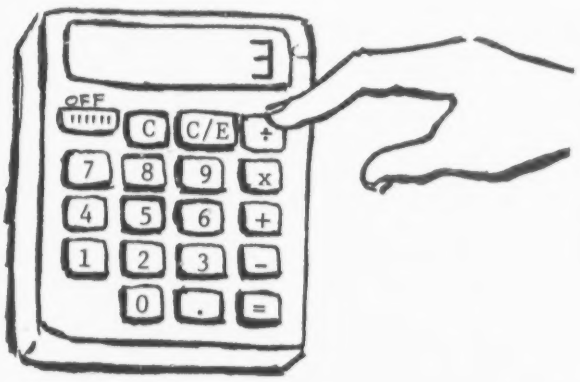
In case you have a mixed fraction, first convert the fractional part to a decimal, then add the integer part.

Example: Convert "5 3/4" to a decimal.

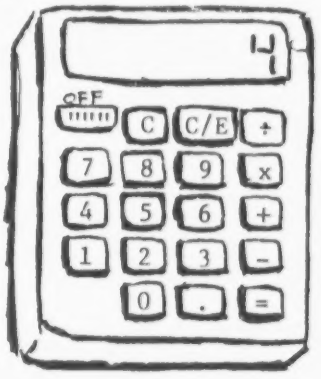
1. ENTER "3"



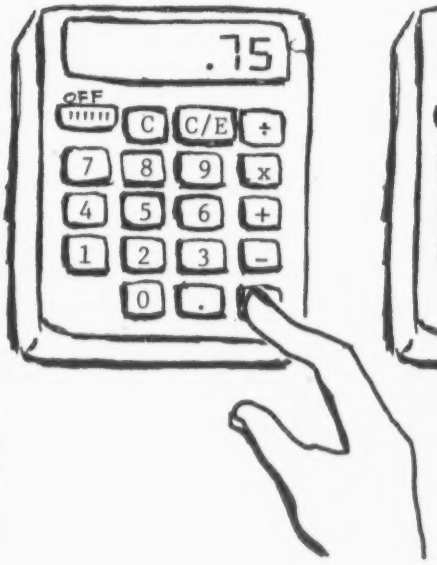
2. Press "÷"



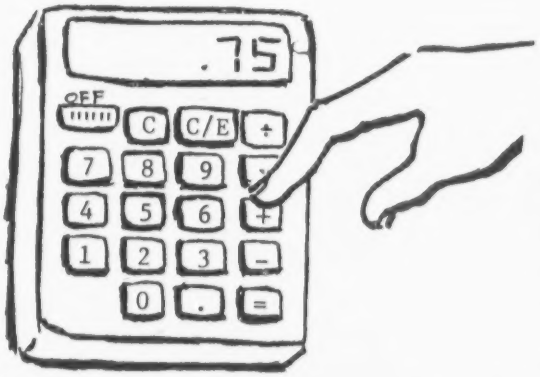
3. ENTER "4"



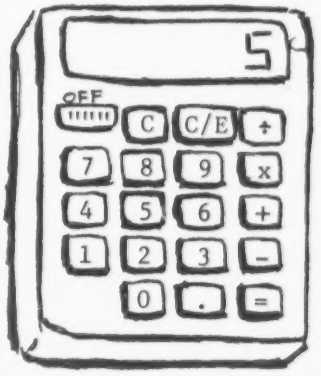
4. Press "="



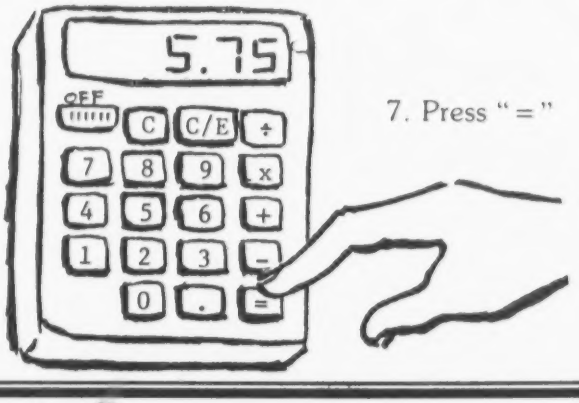
5. Press "+"



6. ENTER "5"



7. Press "="



Circle the Best Buys

Sweater Sale
1/4 off $29.95
or
30% off $30.95

Boot Sale
1/3 off $89.95
or
$15.00 off $79.95

Coat Sale
20% off $94.88
or
33% off $120.00

Designer Jeans
1/2 off $49.95
or
25% off $36.00

Shirts/Blouses Sale
2/$39.99
or
30% off $39.99

Belt Sale
$7.95 reg. $9.95
or
2 for $14.99

Kalculator Kampers

Calculate the following problems, and turn the calculator around so you can read the numbers on the display. Insert these words in the blanks in the story on the following page.

1. 0.140
2. 2 × 3859
3. 8 × 101
4. 255 + 82
5. 4 × 202
6. 29 × 1220
7. 34 × 227
8. 2 × 257
9. 400 − 63
10. 53 × 146
11. 11 × 537
12. 5 × 67
13. 0.140
14. 2 × 404
15. 111 + 226
16. 17 × 454
17. 13 × 461
18. 755 × 493
19. 0.140
20. 1000 − 192
21. 890 + 17
22. 515 × 103
23. 128 × 25
24. 0.140
25. 18 × 51

Kalculator Kampers

In a small midwest town nestled along the __ __ __ __ River, lived three very good friends named __ __ __ __, __ __ __ and __ __ __. __ __ __ was somewhat __ __ __ __ and __ __ __ __ was a little small for __ __ __ age. __ __ __ was neither small nor large, he was just average. Each summer after the last school __ __ __ __ rang, the trio bolted off for their summer campout. From their lean-to made of old __ __ __ __, they could __ __ __ the __ __ __ __ River. Each morning __ __ __ would build a fire and __ __ __ would cook. __ __ __ __ loved to watch the __ __ __ __ __ __ __ __ __ in the skillet. After breakfast, the boys would spend the day hiking, swimming, or exploring the banks of the __ __ __ __. Each fall the boys reminisce and will never forget the time __ __ __ slipped off the __ __ __ and his __ __ __ __ got stuck in the slimy mud. When it began to __ __ __ __ into his shoes, he lost his balance and became the __ __ __ __ River's original __ __ __ FOOT MUD MONSTER.

YE OLDE SANDWICH SHOPPE

Sandwiches	
Pork Tenderloin	1.45
Roast Beef	1.69
Hamburger	1.10
Ham & Cheese	1.35
Peanut Butter & Jelly	.99
Veggie	1.25
BLT	1.75

Side Orders	
French Fries	.45
Onion Rings	.65
Small Salad	.50
Salad Bar	1.50
Fried Mushrooms	.85

**Cheese--.15 extra
Lettuce and Tomato--.15 extra

Drinks	Sm.	Med.	Lg.
Soft Drinks	.25	.35	.45
Malts	.60	.75	.90
Iced Tea	.25	.35	.45
Milk	.30	.40	.50
Lemonade	.25	.35	.45
Lemonade Pitcher			1.25

Pizza	Sm.	Med.	Lg.
Hamburger	4.75	5.90	7.50
Sausage	4.75	5.90	7.50
Pepperoni	4.75	5.90	7.50
Canadian Bacon	5.25	7.15	8.95
Mushroom	4.75	5.90	7.50
Vegetarian	4.95	6.50	8.25
Deluxe	5.50	7.60	9.75

**additional topping--.80 extra

1. Josie, Melissa, and Kathy ordered a medium sausage and mushroom pizza and three large soft drinks. What was their bill? How much did each girl owe?

2. Brian polished off a roast beef sandwich, an order of French fries and a medium chocolate malt. How much change did he receive from a $5 bill?

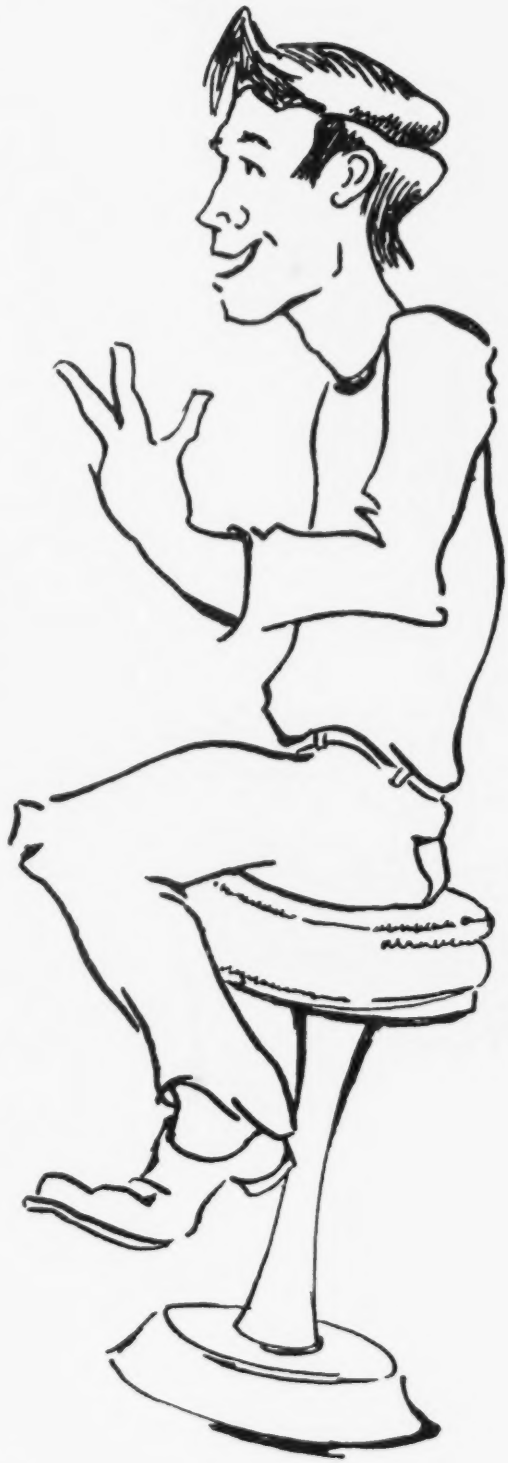
3. Peter and Roger split a large deluxe pizza with extra cheese. Peter ordered a large soft drink and Roger had a medium soft drink. What was each boy's bill?

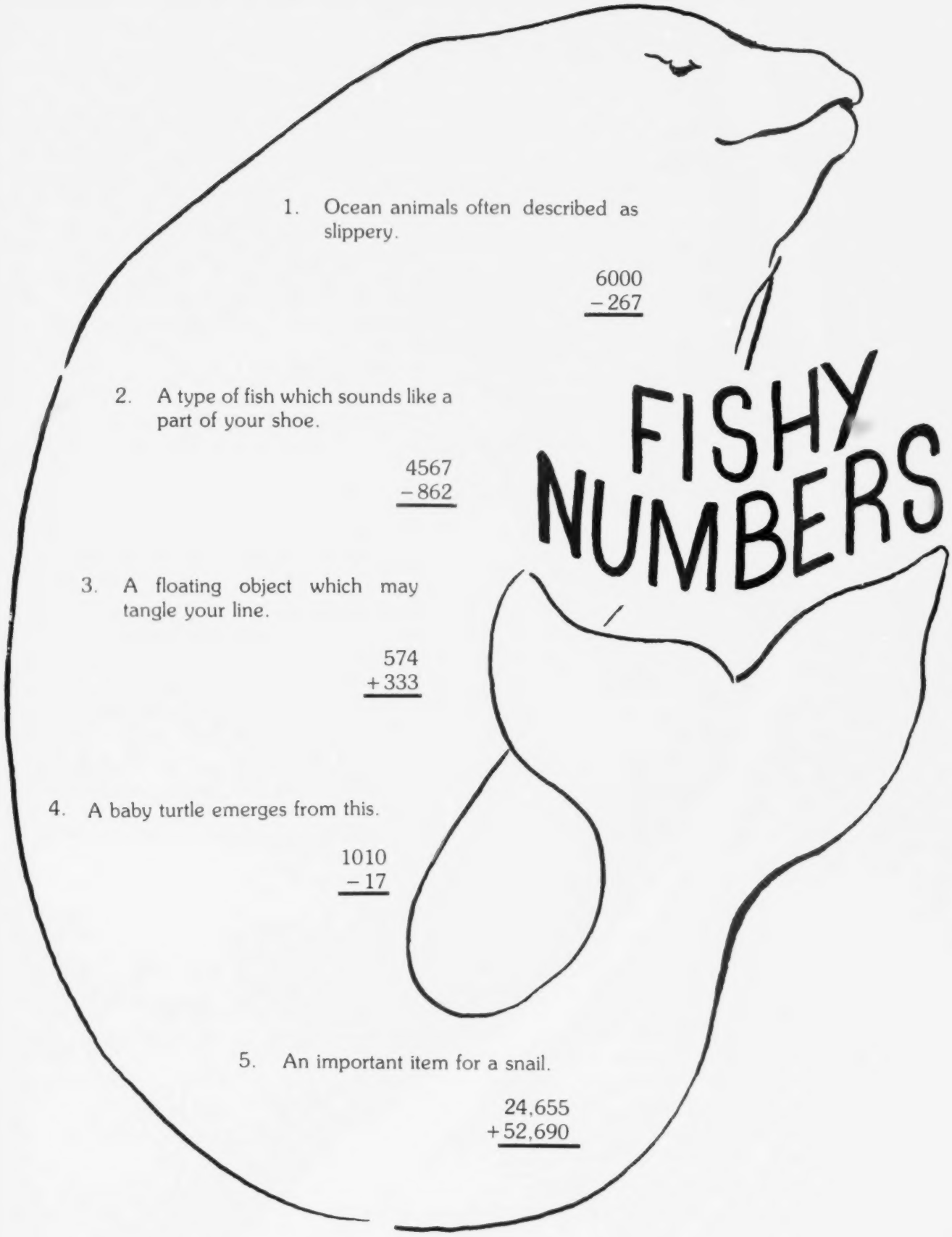
4. Susie is on a diet again. She asked the waitress for a small salad and a medium diet soft drink. How much was her bill?

5. Mr. Jones took his family to the Sandwich Shoppe for lunch. Angie wanted a pork tenderloin, Marc wanted a peanut butter and jelly sandwich, Jan wanted a Veggie, and Jim wanted a ham and cheese. Mr. Jones ordered a small pizza with Canadian bacon and mushrooms. They all shared a pitcher of lemonade. What did Mr. Jones pay the cashier? He left a 20% tip for the waitress. How much did he leave?

6. Bobby had $2.50 to spend on dinner. He wanted a BLT and a small glass of iced tea. Did he have enough money for French fries?

7. Cindy and Eric treated their baseball coach, Mr. Myers, to a lunch at the Sandwich Shoppe. He ordered a roast beef sandwich, the salad bar, and a medium glass of milk. Cindy and Eric each ordered cheeseburgers with lettuce and tomato and small soft drinks. What was their total bill?





FISHY NUMBERS

1. Ocean animals often described as slippery.

$$\begin{array}{r} 6000 \\ -\ 267 \\ \hline \end{array}$$

2. A type of fish which sounds like a part of your shoe.

$$\begin{array}{r} 4567 \\ -\ 862 \\ \hline \end{array}$$

3. A floating object which may tangle your line.

$$\begin{array}{r} 574 \\ +\ 333 \\ \hline \end{array}$$

4. A baby turtle emerges from this.

$$\begin{array}{r} 1010 \\ -\ 17 \\ \hline \end{array}$$

5. An important item for a snail.

$$\begin{array}{r} 24{,}655 \\ +\ 52{,}690 \\ \hline \end{array}$$

KREEPY KODES

1. Merlin's cave seemed to have a luster about it, or a

$$\begin{array}{r} 61{,}868 \\ -\,6789 \\ \hline \end{array}$$

2. The count lived in a castle high on a

$$\begin{array}{r} 133 \\ \times\,58 \\ \hline \end{array}$$

3. The magician held the solution in the hollow of his hand, or in his

$$\begin{array}{r} 593 \\ \times\,13 \\ \hline \end{array}$$

4. The children crept into the haunted house. Suddenly they heard a loud

$$500\overline{)\,40}$$

5. The old witch cackled with

$$11\overline{)\,37{,}169}$$

33

TREASURE HUNT

You're looking for the lost treasure. Solve each code, discover each clue, and you find the missing treasure!

Clue 1. 225 ÷ 250 = _____.

Clue 2. Incredible 4000 − 249 = _____ of 2.1 ÷ 30 _____.

Clue 3. Old 3869 + 3869 = _____ tower.

Clue 4. Lonesome land of the 248,266 + 252,525 = _____.

Clue 5. Hillbilly 3344 ÷ 11 = _____ down party.

Clue 6. Ghastly 67 × 27 = _____ desert.

Clue 7. Heathens 9876 − 2162 = _____

Clue 8. Bloody 227 + 681 = _____.

Clue 9. Odorous 0.140 _____ River.

Clue 10. 142 × 5 = _____!

WHAT'S COOKING?

There are 24 students in Brad and Kim's class. Increase the following recipes to serve the class.

Large Sugar Cookies

for 8	for 24
1 cup sugar	_____ cups of sugar
1 egg	_____ eggs
2/3 cup butter	_____ cups butter
2 1/4 cups flour	_____ cups flour
3/4 tsp. baking powder	_____ tsp. taking powder
3/4 tsp. vanilla	_____ tsp. vanilla
1/4 tsp. salt	_____ tsp. salt

Chinese Chicken Sauteed Rice

Serves 6	Serves 24
1/2 chicken breast (boneless)	_____ chicken breasts
3 tbsp. oil	_____ tbsp. oil
5 eggs	_____ eggs
3 cups rice	_____ cups rice
1/4 cup bean sprouts	_____ cup bean sprouts
1 small onion	_____ small onions
3/4 tsp. soy sauce	_____ tsp. soy sauce
1/8 tsp. pepper	_____ tsp. pepper
1/2 tsp. salt	_____ tsp. salt

Write two of your favorite recipes and increase them to include enough for your class. (Remember to be sure to have enough!)

35

TERRIFYING TRAVELS

It's Halloween and your friends decide to visit Monster Mountain and the petrifying places surrounding it. Chart your mileage using the map on the following page.

Route 1

Spider City to Persecution Point _____
Persecution Point to Tarantula Town _____
Tarantula Town to Dracula Dells _____
Dracula Dells to Ghost Hollow _____
Ghost Hollow to Creepy City _____
Total mileage _____

Route 2

Ghost Gulch to Frankenstein Falls _____
Frankenstein Falls to Martian Marsh _____
Martian Marsh to Cadaver Cave _____
Cadaver Cave to Monster Mountain _____
Monster Mountain to Witch's Peak _____
Total mileage _____

More Activities

1. Travel to each place with the fewest possible miles.
2. Design you own horror-ible map.
3. Design a gameboard and use it to play Terrifying Travels.

Dracula
Dells
Frankenstein
Falls
Ghost
Gulch
Ghost
Hollow
Martian
Marsh
Witch's
Cove
Cadaver
Cave
Creepy
City
Monster Mountain
Warlock
Valley
Bats
Bay
Witch's
Peak
Spider
City
Persecution
Point
Tarantula
Town

FACTOR MAZES

On the grid below, you will find two mazes--one with numbers that can be evenly divided by 4 and one with numbers that can be evenly divided by 6. There are twenty in each maze. Shade you answers. Time yourself!

6's ↓

78	25	31	79	63	87	59	452
330	270	582	609	116	1296	356	188
425	871	426	282	332	796	1852	308
783	191	645	378	210	534	402	140
258	1194	498	174	1019	678	713	892
1338	88	904	1938	1506	144	628	172
462	229	556	319	1004	1292	51	23
2778	693	886	507	284	388	100	52

↑ 4's

Holiday Shopping Center

The purpose of this center is to encourage creativity in math. The relatives described on the following pages epitomize many of the personality traits and tastes of real people the students know. I've used many variations on this theme and found the students love the center. Some of our favorite activities are listed below, but I'm sure you and your students will come up with even more!

1. Using current newspapers and limited budgets, have your students shop creatively. Share your choices and reasons.

2. Using catalogs, have students choose a character and list as many gifts as they can in a specified price range. Compare.

3. Speed shopping--using catalogs, have the students shop trying to come as close as possible to a specified amount of money.

4. Have students cut out pictures of their outrageous relatives from magazines and write descriptions beside them. Let them exchange "relatives" and descriptions and shop for some of them. Choose 5 gifts each. Share shopping successes and bargains.

5. Run off Bingo cards and have students use 22 of their gift prices in the squares. Using a catalog, randomly choose gifts and call out prices. GIFTO!

6. Have students chart the frequency of certain prices (or graph the frequency of gifts in a certain price range).

7. Have students "invent," draw, describe, price, and "sell" (by presentations, posters, ads, etc.) the perfect gift for everyone on your list. Tabulate the winners.

Cousin Molly is a red-headed monster! She's only 6 years old and everyone wonders if she'll make it to seven years! She put worms in the spaghetti her mother was serving to her father's boss. She painted her little sister's hair red. She cut off one of her pigtails and tried to trade it for a pet snake. She put her father's best jacket in the Goodwill collection. And she ate all the candy out of the heart-shaped box for her mother.

gift _____

cost _____

reason _____

Uncle Harvey is a farmer. His alarm goes off at 4:30 in the morning and he's out doing chores before breakfast. Uncle Harvey's so skinny, he sometimes loses his shadow. He enjoys sitting in front of the fire and playing chess with one of his friends. Every Saturday night, Uncle Harvey goes to the Local Firefighters' Hall for a meeting, then a Bingo party.

gift _____

cost _____

reason _____

Grandfather George is very difficult to buy for. He's a prominent banker and has everything that money can buy. He loves to invest in the stock market, go to art auctions, and listen to classical music. Although few know it, he's really a softie under all that pomp and prancing. He adores all his grandchildren, but YOU are his favorite!

gift _____

cost _____

reason _____

Great Aunt Alice is a jolly old lady. Friends love to drop by to sample the delicious cookies, cakes and pies baked by Aunt Alice. Every Thursday, rain or shine you can find Aunt Alice at the Senior Citizens' Center taking disco lessons. On lazy, hot summer afternoons, Aunt Alice slips down to the creek, spreads out her picnic blanket, turns on her radio, leans back and fishes.

gift _____

cost _____

reason _____

Poor Aunt Hortense! Anytime the flu hits town she gets it! You can see her tiny eyes peeking waterily from behind her well-used handkerchiefs. Bright light makes her head ache so she seldom goes out in the daytime. An avid mystery and true romance reader, Aunt Hortense knows to stay in at night. Felicia Feline, her cat, is often her only company. Walk past her house at dusk, and you'll hear Aunt Hortense serenading Felicia and swinging on her porch.

gift _____

cost _____

reason _____

Cousin Charlie may be only seven, but everyone says he'll be an astronaut when he grows up. At night, Charlie uses his "Super-Snooper" telescope to look for UFO's. *Star Trek*, *Sky Gordon* and *Spiderman* are his favorite TV shows. Along his wall are airplane and rocket models and maps of the galaxy. For his science project, Charlie made a rock collection. (He didn't want to catch and kill any butterflies.)

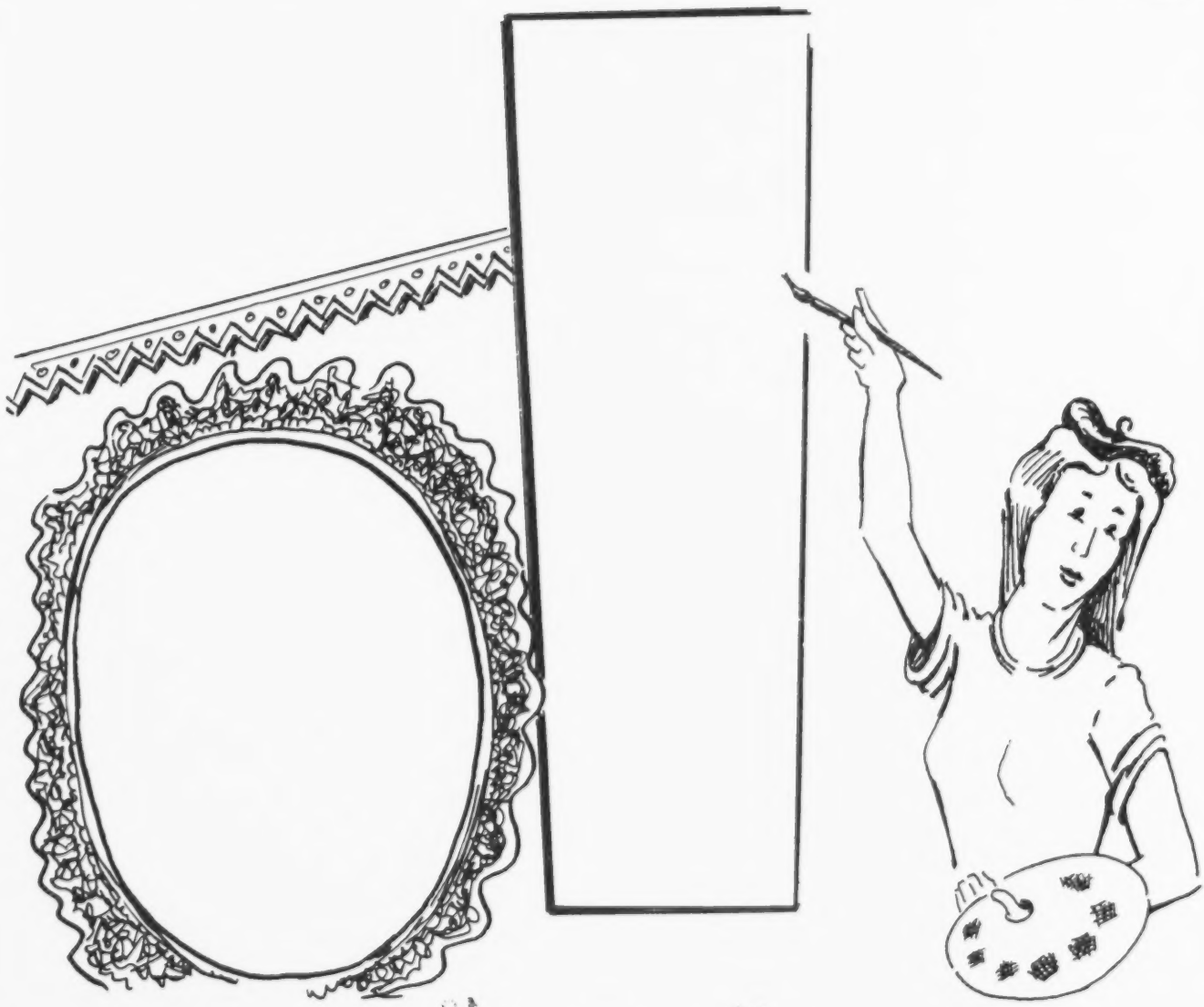
gift _____

cost _____

reason _____

Create your own---

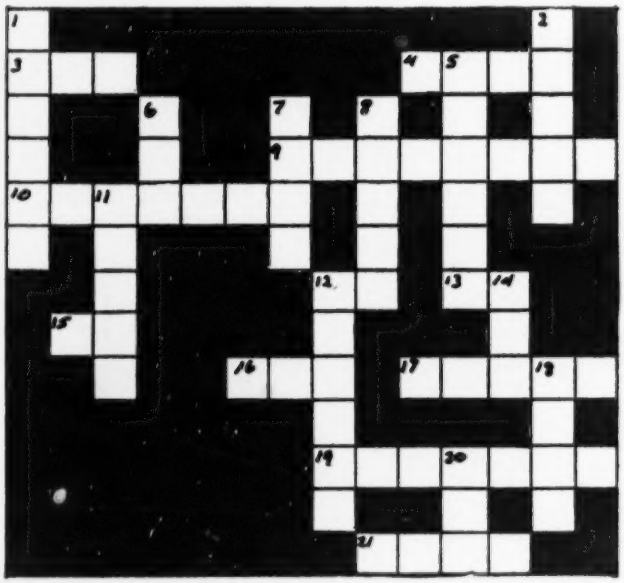
OUTRAGEOUS RELATIVES



KALCULATOR KODE KROSSWORDS

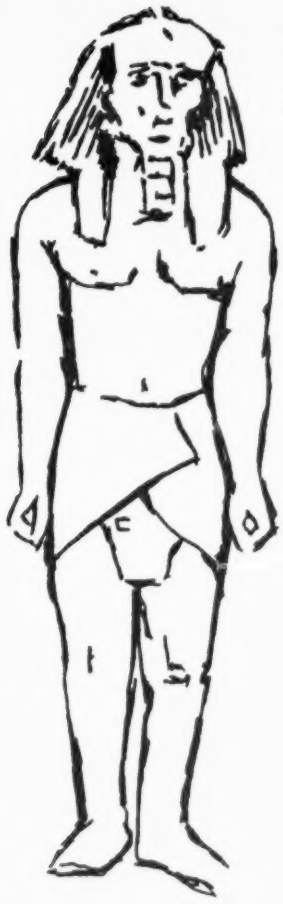
Across

3. Opposite of truth.
   (635 − 318)
4. What you wear on your feet.
   (105 × 29)
9. What eggs come in.
   (12,345,678 + 65,000,315)
10. Underwater glasses.
    (5,555,555 - 175,646)
12. Opposite of stop.
    (9 ÷ 10)
13. Nickname for Oswald
    (340 ÷ 17)
15. A short verb.
    (2397 ÷ 47)
16. Another name for a pig.
    (1000 − 96)
17. Opposite of tight.
    (1667 × 21)
19. What your writing should be.
    (3,456,543 + 325,394)
21. Another name for a duck's beak.
    (34 × 227)



Down

1. Santa rides in this.
   (125 × 3931)
2. Opposite of goodbye.
   (3867 ÷ 5000)
5. Santa's laugh.
   (121,212 ÷ 300,000)
6. What a chicken lays.
   (2000 − 1007)
7. A girl's name.
   (39 × 142)
8. Eskimos live in this.
   (791 ÷ 10,000)
11. It laid the golden egg.
    (14,293 + 20,716)
12. Laugh.
    (123,456 + 256,463)
14. Where you find animals.
    (7 ÷ 350)
18. Opposite of buy.
    (8901 − 1166)
20. Opposite of healthy.
    (8481 ÷ 11)

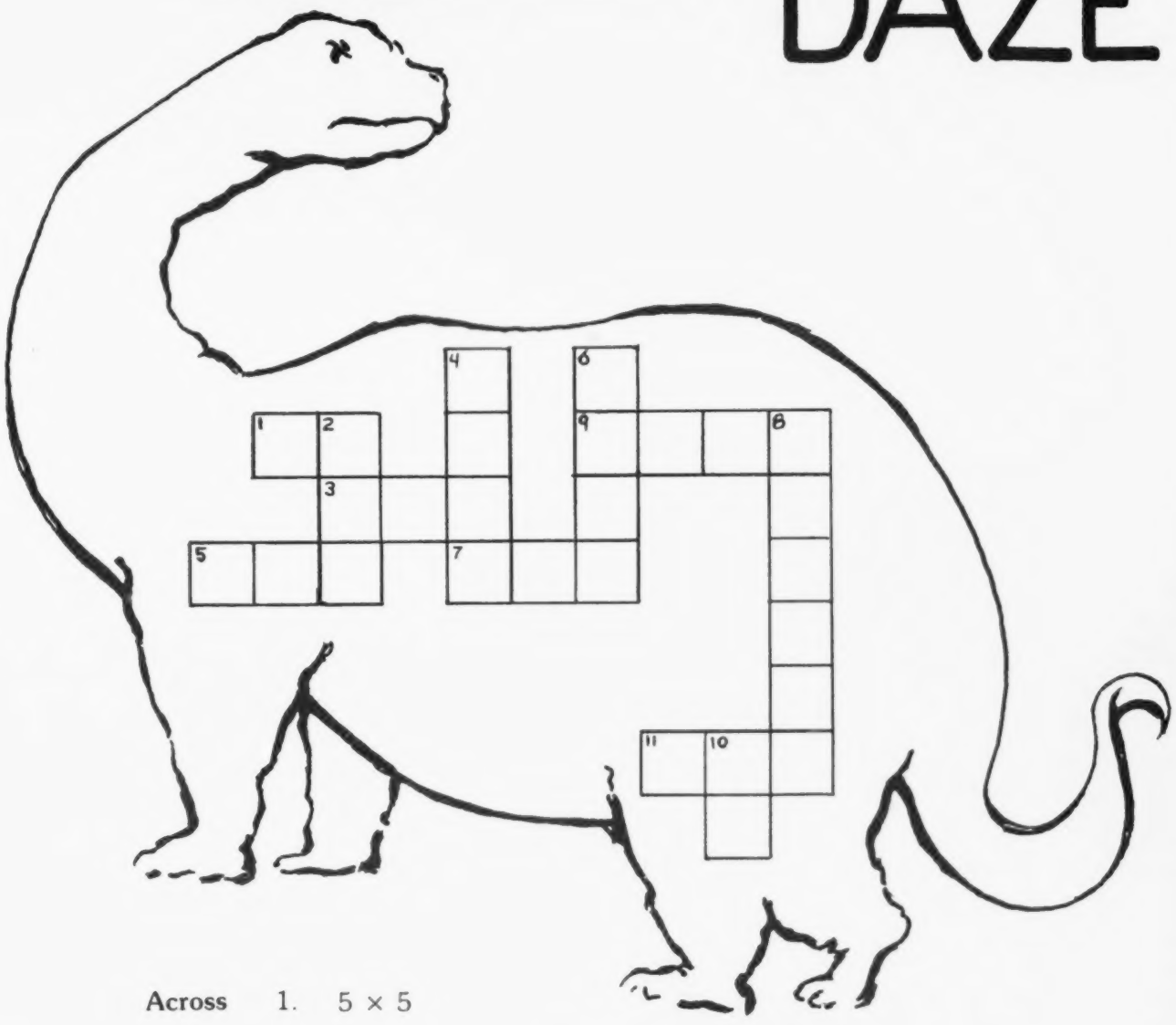


YESTERDAY, TODAY, TOMORROW

This section was written to give a sample of a few of the ways math (and the calculator) can help learning become more relevant to the student in today's classroom. As stated before, math, like reading, is part of nearly everything. History becomes more meaningful if we can help students really conceptualize time, area, space, distances, speeds, weights, etc., in comparison with concepts with which they are familiar.

Each topic here is only a sample of the multitude of approaches we can use to extend the understandings in curriculum through math and reduce misunderstandings and arithmetic errors with the calculator. Encourage your children to question as they read and explore the numerical facts available on most subjects. They'll be amazed at the interesting research available in various reference books previously considered dull and boring.

DINOSAUR DAZE



Across

1. 5×5
3. 6×89
5. 25×6
7. $1782 \div 9$
9. $30{,}000 \div 8$
11. 64×5

Down

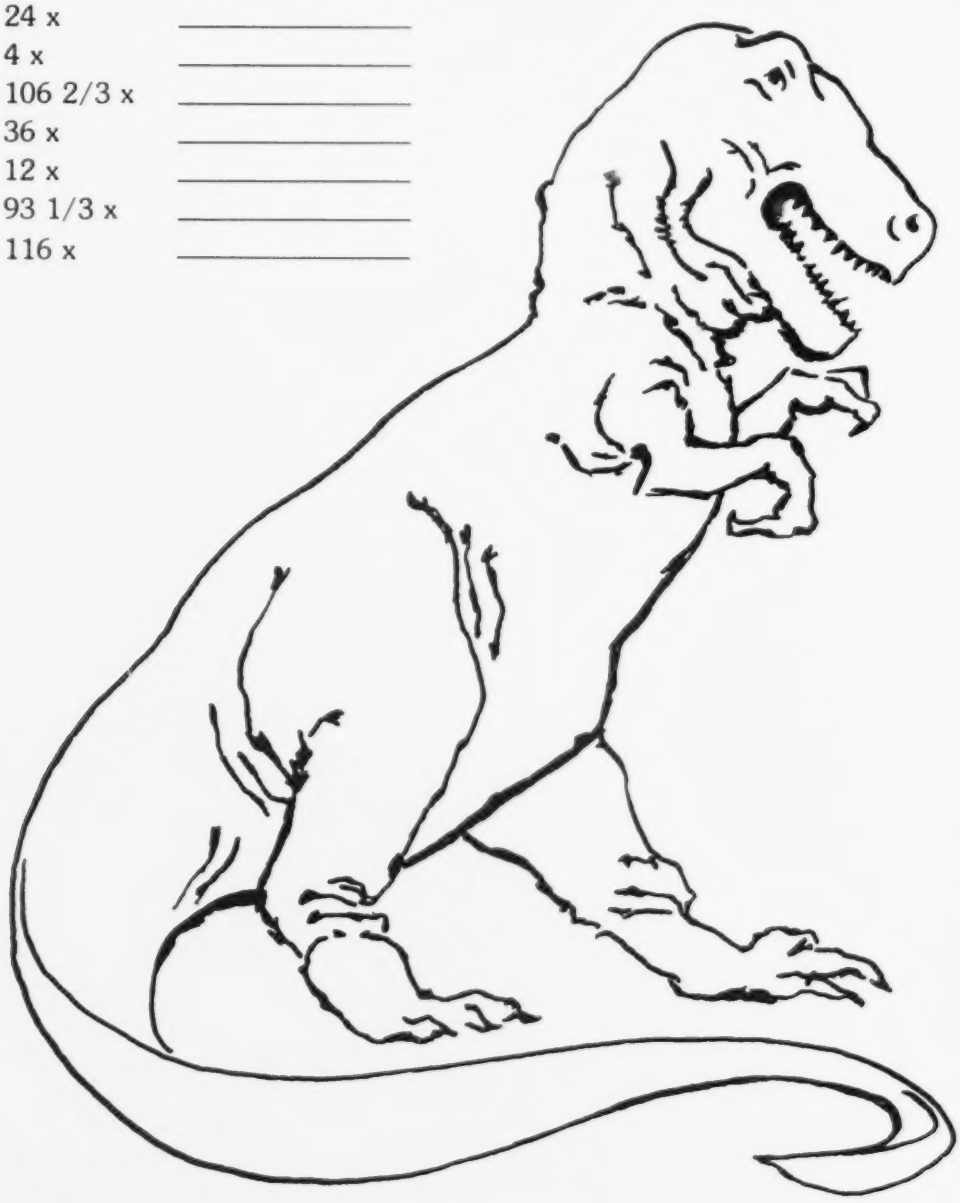
2. $3850 \div 7$
4. $13{,}196 - 8955$
6. 61×38
8. $888{,}881 + 11{,}119$
10. $16 + 4$

In Days of the Dinosaur

The Ichyornis, a prehistoric minature dinosaur, was only 9 inches long. Calculate the length of some other prehistoric animals in comparison to the Ichyornis.

Each relative length shows the number of times greater the dinosaur is than the Ichyornis. Remember 9 equals .75.

	relative length	length in feet
Brachiosaurus	109 1/3 x	_____
Tyrannosaurus	60 x	_____
Stegosaurus	24 x	_____
Thecodonts	4 x	_____
Sauropods	106 2/3 x	_____
Allosaurus	36 x	_____
Mammoth	12 x	_____
Brontosaurus	93 1/3 x	_____
Diplodocus Carneegee	116 x	_____



THE ROMAN LEGIONS

The Roman Legions of the Roman Empire contributed significantly to progress of the Empire as well as serving as a conquering force. A Legion was Roman citizens who served 20-year terms. Each Legion was made up of 3000 Infantry soldiers (1800 heavily armed foot soldiers and 1200 lightly armed foot soldiers) plus 300 Cavalry soldiers on horseback. They were joined by auxiliary forces of equal size and divided into companies of 60 men.

The Legions built roads, bridges and walls in times of relative peace. The famous Hadrian Wall is 76 miles long, 8 feet thick and 20 feet high. They also built the Constantine fort with 70-foot-high walls that were 14 feet thick. The 670-foot Roman Bridge at Alcantara, Spain, was designed by Roman Legion engineers and built by soldiers. It's nearly 2000 years old now (1982) and there's no mortar anywhere in its 170-foot-high granite arches.

The Roman Legions were noted for their military prowess and seldom suffered defeat. One of the most crushing blows the Legion ever sustained was at the hands of a Carthaginian general named Hannibal. Hannibal

crossed the Alps with infantrymen numbering 60,000; and by the time he reached Italy, he had only about 25,000 men, 6000 horses and several elephants left. With 15,000 recruited Gauls, he won brilliant battles against 233 Roman Legions. One out of every 14 Roman Infantry soldiers was killed on one especially desperate day. The Punic Wars ended in 201 B.C., seventeen years after they had begun.

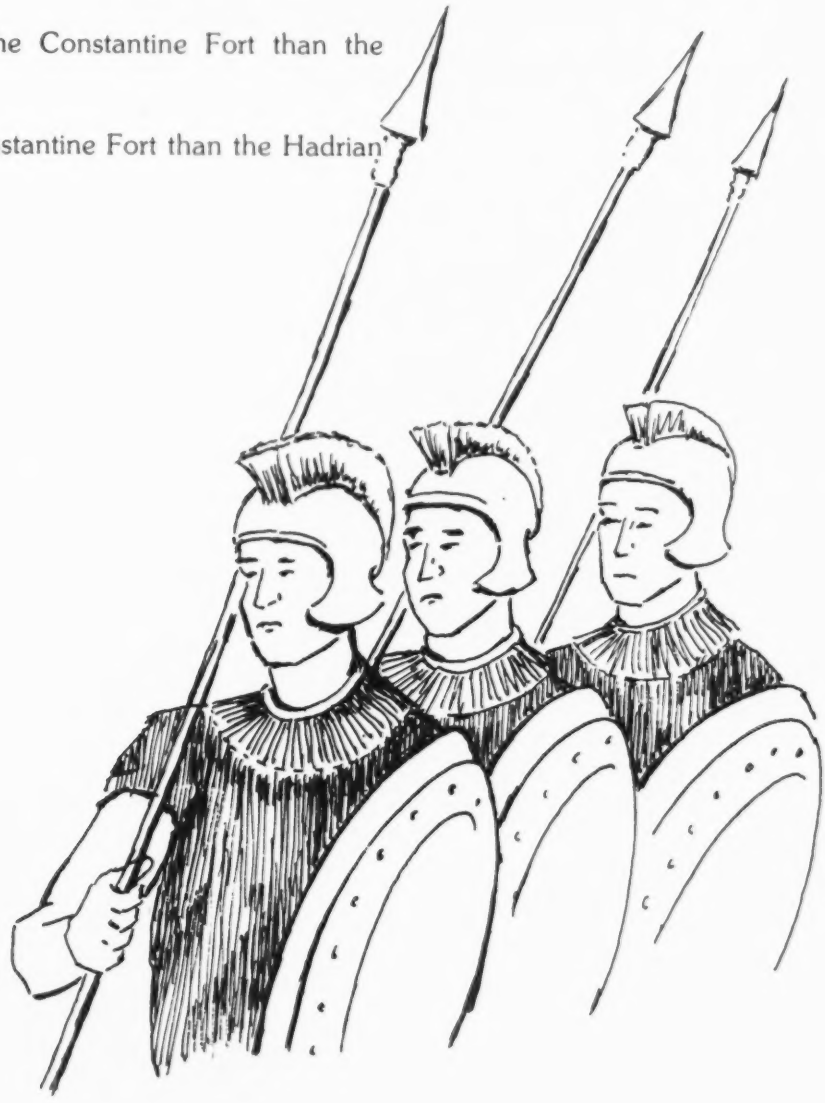
1. When was the bridge at Alcantara built?

2. How many cubic feet are in the famous Hadrian Wall?

3. How many Roman Legion Infantrymen and Cavalry soldiers did Hannibal first battle?

4. How many feet higher is the Constantine Fort than the Hadrian Wall?

5. How much thicker is the Constantine Fort than the Hadrian Wall?



ANCIENT ROME

Write your own questions using the facts written on these ancient scrolls.

The Forum of Trojan is probably the most costly monument of Ancient Rome. Twenty-four million cubic feet of rock and dirt were moved to make room for it.

Roman Measurement

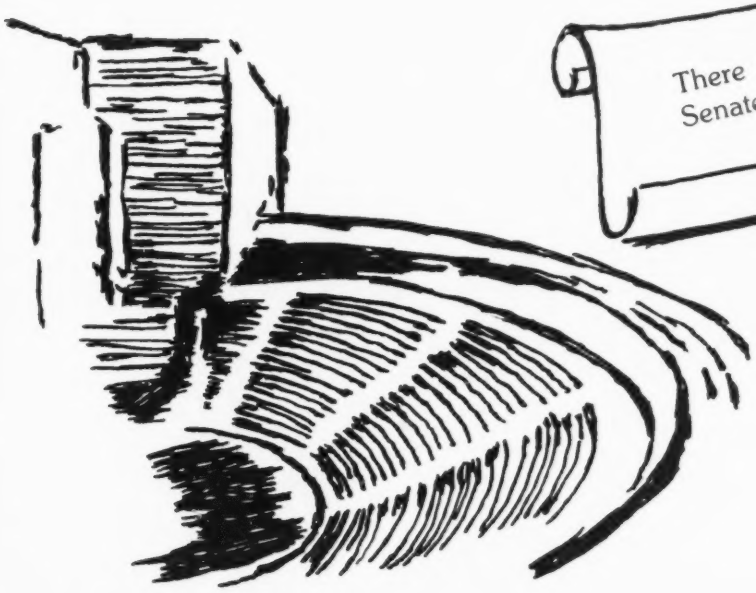
iugerum: area of land a yoke of 2 oxen could plough in 1 day (5/8 acre).
mile: 1618 yards
pace: 5 feet
foot: 11 1/2 inches
pound: 12 ounces
modius: 1 gallon 7 1/3 pints, or 16 Roman pints.

At the Circus Maximus, chariot races thrilled up to 180,000 spectators.

The Pantheon, built as a temple to the gods, is 140 feet high and 142 feet in diameter.

There were 300 Senators in the Roman Senate.

The great Colosseum Amphitheater held 50,000 people.



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MYSTERIES OF THE NILE

1. The pyramid of Giza contains over 2,280,000 blocks of stone. Each stone weighs more than 2000 kilograms. If a kilogram is equal to 2.2 pounds and a ton is equal to 2000 pounds, how many tons of stone are in a pyramid?

2. The great river, the Nile, floods yearly. An oasis formed by receding waters borders the river and is 7 miles wide and 800 miles long. How many square miles of oasis does the Nile create yearly?

3. Obelisks near Cairo,Egypt, are 18 times as tall as the average Egyptian man. If the height of the average Egyptian man is five and one-half feet, how tall are the obelisks?

4. There are 386,600 square miles of land in present-day Egypt. Deserts compose 96% of the land. How many square miles of land are not desert in Egypt?

5. The highest point in Egypt is Jabal Katrinah, which has an elevation of 8,650 feet above sea level. The Qattain depression is 435 feet below sea level. How many feet are there between these points?

6. Cleopatra became queen in 51 B.C. Nefertiti, famous for the lovely sculpture of her head, was queen around 1370 B.C. Queen Hatshepsut, the queen who encouraged trading and the arts, ruled around 1570 B.C. How many years separated the rule of these queens?

7. Horses were used to draw chariots beginning around 1700 B.C. Camels were not used until nearly 750 BC. How many years have the Egyptians been using camels?

VIKING VOYAGES

Nordic Sea roving bands called Vikings pirated and plundered the European coasts for four centuries, beginning in the 700's. Their amazing engineering ability enabled them to build swift and powerful ships capable of sailing long distances. The small ships built by the Vikings were 16 feet wide and 75 feet long. The huge ocean-going ships were three times as long and had both oars and sails.

840 A.D.	Norwegian Vikings find and settle the city of Dublin, Ireland.
845 A.D.	Vikings attack Paris.
856 A.D.	Danish Vikings besiege Paris.
860 A.D.	Norsemen attack Constantinople and are repulsed.
878 A.D.	Alfred the Great, King of Wessex, halts Viking invasion of England.
885 A.D.	Danes destroy Paris.
903 A.D.	Constantinople attacked. Emperor pays huge ransom in gold to save the city.
911 A.D.	King Charles of France and Rollo of Denmark make a pact, and Rollo becomes Duke of Normandy.
930 A.D.	Vikings in Iceland form the oldest representative assembly in the world, a "primitive parliament."
1000 A.D.	Leif Ericson lands on coast of Vinland.
1000 A.D.	Viking settlement founded on coast of northern Newfoundland.
1003 A.D.	Viking Kings Olaf of Norway and Sweyn of Denmark sweep through England.
1013 A.D.	Ethelred, King of Wessex, flees. Sweyn, King of Denmark, becomes King of Wessex.

VIKING VOYAGES

1. How many years ago did the Vikings found Dublin, Ireland?

2. How many years passed between the siege and the destruction of Paris?

3. Approximately how many square feet were the decks of the Viking ships? (1 x w-1 x 1 x w)

4. England or Wessex was attacked twice by Danes. How many years after the first attack of Wessex did the Danes succeed in conquering Wessex?

5. How many years passed between the settling of the city of Dublin, Ireland, and the settling of northern Newfoundland?

SPORTS NOW AND THEN

1. **Track and Field.** The oldest Olympic long jump record of 23 feet 1 1/2 inches was said to have been made by Chronis of Sparta in 656 B.C. The present long jump record for women was set in 1978 by the Russian jumper, Vilma Bardauskiene who jumped 23 feet 3 1/4 inches. The holder of the world record for the long jump in the men's division is presently Bob Beaman of the U.S., who won it in 1968. His jump was 5 feet 11 1/4 inches farther than the Russian record holder. How far did Bob Jump?

2. **Baseball.** A player's batting average is determined by the number of hits he gets divided by the number of times that he is "officially" at bat. Reggie Jackson hit .300 in 1980. George Brett batted .390 in that same season. Kalculator Kid Kevin plays in Little League, and had 40 official times at bat last summer. He had 9 hits. What was his batting average?

3. **Bowling.** According to the Professional Bowlers' Association, the most money earned in a lifetime by any bowler on the PBA circuit was won by Earl Anthony. He had taken home $719,141 through the 1979 season. The record holder for the highest earnings in a year has been Mark Roth for three straight years with winnings of $105,583 in 1977, $134,500 in 1978, and $124,516 in 1979. How much money does Mark make each year on the average?

4. **Basketball.** Wilt Chamberlain of the Philadelphia Warriors holds the professional records for the most points scored in a single game (100 points), as well as the most points scored in a season (4,029 points). To determine the average number of points scored per game, add up all points scored during the season and divide by the number of games played. Wilt "The Stilt" played 80 games in that season. What was his record-breaking average number of points scored per game?

Sports Shorts

Have interested students research and collect information about famous races and drivers/jockeys. Assemble speed records, qualifying times, financial records, records of earnings, etc. Use all these to assess the history of racing and perhaps predict the future.

A. Find average earnings of various winners.

B. Determine average increase in speed.

C. Predict and plot averages for future.

D. Compare costs of various forms of racing.

E. Simulate a race with two or more students researching particular horses or drivers and have them "win" by systematically "proving" the odds for their choice.

KALCULATOR KICKING

Game plan I -- add 0.9 then subtract 0.4.

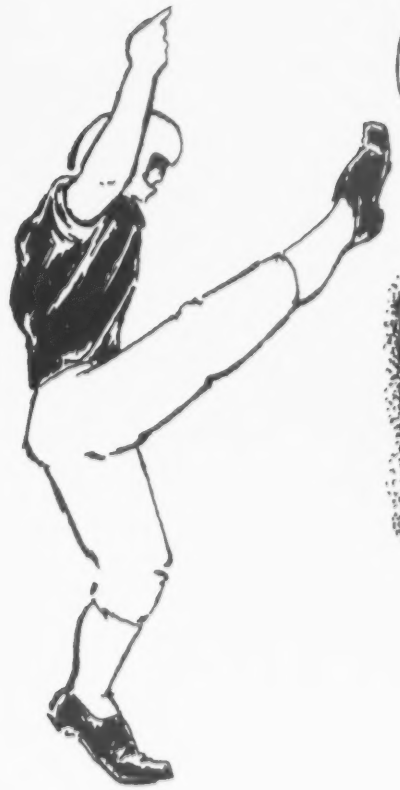
17.3

Game plan II --
add 5
then
divide by 3.

367

Game plan III --
multiply by 3
then
divide by 2.

16



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OUT-OF-THIS-WORLD MATH

Mission Heat Wave

Mercury was named after the swift messenger of the gods in Roman mythology. This messenger, a favorite of the powerful god Jupiter, wore a winged hat which helped him achieve great speed when carrying messages for the various gods. The planet, Mercury, travels in an elliptical orbit around the sun at a speed of around 30 miles per second. How many miles does this hot little planet with a temperature of 350 degrees Fahrenheit travel in 24 hours? _____

Mission Solar Energy

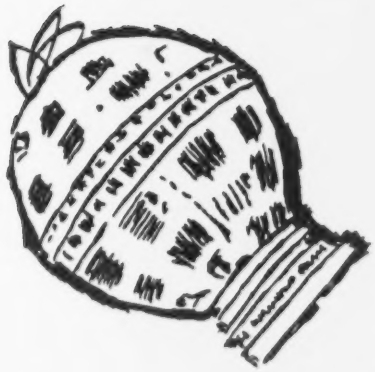
The sun, we know, moves in two ways. It moves along with billions of other stars in the Milky Way at a speed of over 43,000 miles an hour. It also rotates on its axis, like the earth, taking about 25 days for each rotation. How many hours does it take for the sun to complete one rotation? _____

Mission Hot Potato

The Kalculator Kids tell you that the temperature on the sun's surface is over 11,000 degrees Fahrenheit. Temperatures at the center of the sun are as high as 36,000,000 degrees. The oven in your spaceship can only reach a temperature of 525 degrees. How many times as hot is the sun's surface as compared to your oven? _____

Mission Orion

You know that the diameter of the sun is around 865,000 miles. This is not, however, very large compared to many other suns or stars in the sky. Orion, a bright red star, is over 400 times as large as the sun. What would the diameter of Orion be? _____



ECHO and TELSTAR -- COMMUNICATION SATELLITES

In the fall of 1960 ECHO, a huge empty sphere inflated with air and partially covered with a thin layer of aluminum, was launched on a Thor-Delta rocket. Unlike the later models, ECHO contained no electronic equipment and served primarily as a broadband system capable of handling over 590 telephone channels. By the time the TELSTAR was launched, ECHO had orbited the earth nearly 9000 times (277,257,676 miles).

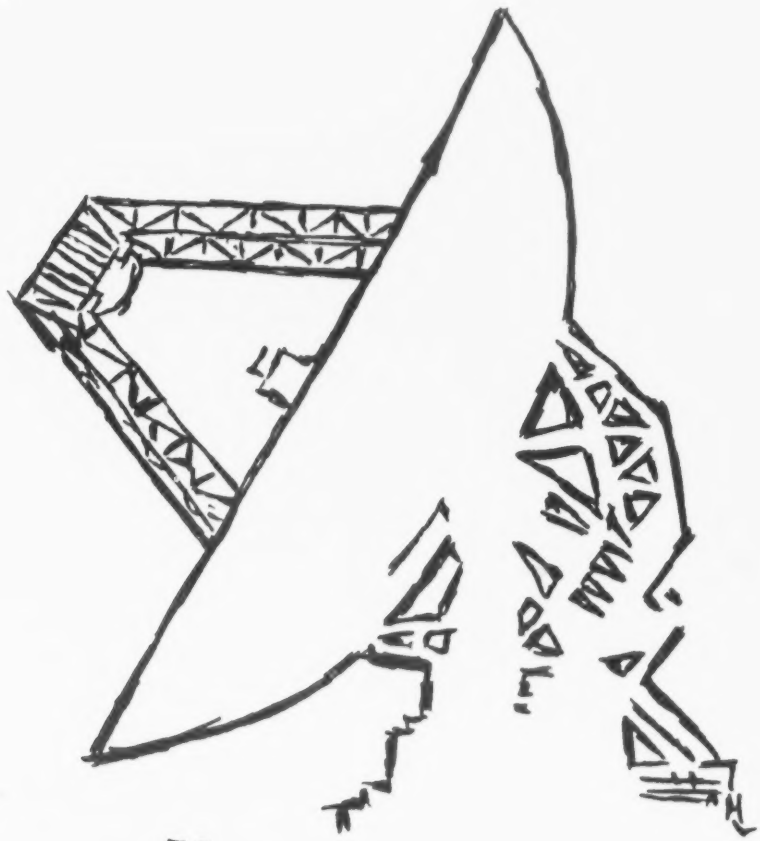
TELSTAR, a small active communication satellite, was launched at 4:35 a.m. July 10, 1962. TELSTAR rode in the nose cone of the Thor-Delta rocket which traveled at 18,400 miles per hour. At 4:46 a.m., TELSTAR separated itself from the rocket and was in its own orbit.

TELSTAR orbited the earth at a speed of 5 miles a second in a path approximately 3000 miles from Earth. TELSTAR orbited 5 times before scientists on the ground were able to receive signals from the 34½" spherical satellite. The entire orbit was

planned to take 156.54 minutes. The fact that it took 157.797 minutes demonstrates the precision with which this mission was planned. Filled with electronic equipment capable of receiving, amplifying, and transmitting signals, TELSTAR gathers scientific data on space as well as transmitting television programs "live" among 16 European nations and the U.S.

TELSTAR as well as its passive satellite companion, ECHO, also serves as a microwave relay.

1. How many miles was each orbit of the ECHO?
2. How many minutes did it take the TELSTAR to begin its own orbit (from launching time)?
3. How far out did the Thor-Delta rocket travel before it released TELSTAR?
4. How fast does TELSTAR travel in its orbit?
5. Find out about recent satellites and make comparisons.



Facts and Firsts

1. The first American woman to become an accredited physician was Dr. Elizabeth Blackwell in 1849. The American Medical Association was founded in 1847, but no woman physician was allowed to join until 1876. How many years did it a take for a woman physician to be elected to the membership of the AMA?

2. A baby kangaroo (a joey) is only a little over an inch at birth. A full grown kangaroo's length is often seven feet. How many times as large as a baby kangaroo is an adult kangaroo?

3. Taxes, taxes taxes. Our first national income tax was levied in 1861. In 1872 it was rescinded. Then in 1913, the Sixteenth Amendment reinstated the income tax. How many years have we not had an income tax? (Remember our nation was founded in 1776.)

4. The largest mammal in the ocean is the great blue whale. The whale is sixteen times as large as the largest mammal on land, the African elephant. If the whale weighs around 112 tons, how large is the elephant?

5. Jackie Robinson, the first black baseball player in the National League, started with the Dodgers in 1947. The first black player in baseball was in 1883. The National League was founded in 1876. How long did it take before a black was allowed to play on a team in the National League?

6. Leonardo da Vinci tried flying in 1491. The Wright brothers made the first successful flight in 1903. In 1927 Charles Lindbergh soloed across the Atlantic Ocean. Amelia Earhart made her transatlantic solo in 1932. How many years after da Vinci's attempt at flight did Earhart make history?

7. Greenland, the world's largest island, (840,000 square miles) has nearly 31,000 people. Ceylon, one of the smallest islands, has over 25,000 square miles and 9,600,000 people. Compute the number of people per square mile for both islands. Ceylon has around _____ times as many people per square mile as Greenland.

60

Kalculator MAGIC

YOU CAN MAGICALLY COMPUTE FASTER THAN YOUR FRIEND CAN ON THE CALCULATOR.

Have your friend choose any three-digit number and write that number on a piece of paper.

Have her then reverse the number.

Tell her to subtract the smaller number from the larger one, and then divide by 9.

Example

First number 123

Second number 321

Subtract 321
−123
198

Divide 198 ÷ 9 = 22

(You can always give the answer first by subtracting only the last digit from the first digit, and writing it twice!)

In this example, the larger number is 321; simply subtract 1 (the last digit) from 3 (the first digit), and then write it twice (22).

ANSWERS

p. 5 Try It!

1362; 9057; 10,033; 163,301; 1,204,243
979; 8121; 18,064; 150,120; 1,205,101
258; 679; 4375; 1568; 277,718
96; 671; 979; 9829; 222,767
12,671; 29,739; 526,343; 1,120,893; 265,793

p. 7 Kalculator Kodes

514 (hIS)	0.08 (BOO)	7735 (SELL)	345 (SHE)	0.93 (EGO)
5002 (ZOOS)	5514 (hISS)	937 (LEG)	3751 (ISLE)	7714 (hILL)
35,007 (LOOSE)	37,738 (BELLE)	38,079 (GLOBE)	32,135 (SEIZE)	55,079 (GLOSS)
35,339 (GEESE)	491,375 (SLEIGh)	379,919 (GIGGLE)	3,781,937 (LEGIBLE)	35,009 (GOOSE)

p. 8 School Days

Total students present	165
Total students absent	16
Hot lunch count	133
Total lunch money	$99.75
Total book rental money	$2080.00
Total supplies money	$115.20

p. 10 Tabulating Twenty

A. 423.86 B. 252.20 C. 261.80 D. 269.11 E. 325.57

p. 11 Around Town

Southbound				Westbound			
Vine	Green	State	Main		Green	Church	Kneale
7:44	8:02	8:17	8:26	6:40	6:49	6:55	7:02
8:19	8:35	8:48	8:55	7:09	7:18	7:24	7:31
8:59	9:15	9:28	9:35	7:35	7:46	7:53	8:02
9:59	10:15	10:28	10:35	8:25	8:35	8:42	8:50
11:29	11:45	11:58	12:05	9:46	9:56	10:03	10:11

p. 13 Try It!

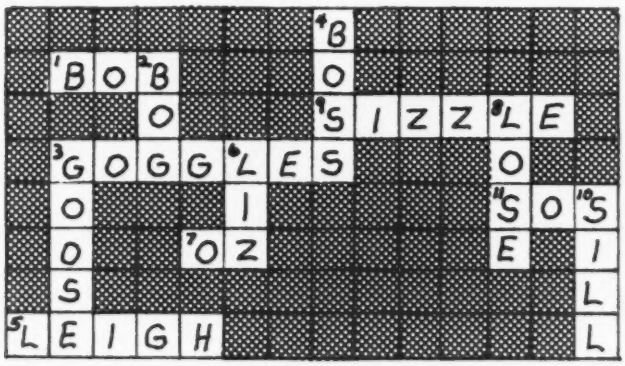
747, 4884, 39,450, 17,752, 272,340
448, 2695, 50,904, 8892, 398,051
84, 59, 63, 45
321, 503, 91, 259
6370, 987, 204, 20,061

p. 16 Scavenger Hunt

House 1. EGGS (5993)
House 2. BIB (818)
House 3. Shell (77,342)
House 4. LOG (907)
House 5. GLOBE (38,079)

62

p. 17 Kalculator Kode Krosswords



p. 19 Decimal Donuts

Clockwise from the arrows:

Donut 1. 24 35 13 9 42 26 15 33
Donut 2. 3 16 9 6 13 18 5 10
Donut 3. 6 18 4 10 22 8 14 12
Donut 4. 4.8 1.5 0.6 4.5 2.7 0.9 3.6 2.1

p. 21 Best Buys

sweater: 30% off $30.95
coat: 20% off $94.88
shirt: 2/$39.99
boots: 1/3 off $89.95
jeans: 1/2 off $49.95
belt: 2 for $14.99

p. 23 Kalculator Kampers

1. 0.140 (OhIO)
2. 7718 (BILL)
3. 808 (BOB)
4. 337 (LEE)
5. 808 (BOB)
6. 35380 (OBESE)
7. 7718 (BILL)
8. 514 (hIS)
9. 337 (LEE)
10. 7738 (BELL)
11. 5907 (LOGS)
12. 335 (SEE)
13. 0.140 (OhIO)
14. 808 (BOB)
15. 337 (LEE)
16. 7718 (BILL)
17. 5993 (EGGS)
18. 372215 (SIZZLE)
19. 0.140 (OhIO)
20. 808 (BOB)
21. 907 (LOG)
22. 53045 (ShOES)
23. 3200 (OOZE)
24. 0.140 (OhIO)
25. 918 (BIG)

p. 25 Ye Olde Sandwich Shoppe

1. $8.05 and $2.68 1/3
2. 2.11
3. Peter: $5.72 1/2, Roger: $5.62 1/2
4. $.85
5. $12.34 and $2.47
6. He has enough.
7. $6.89

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p. 26 Fishy Numbers

1. EELS (5733)
2. SOLE (3705)
3. LOG (907)
4. EGG (993)
5. ShELL (77345)

p. 27 Kreepy Kodes

1. GLOSS (55079)
2. hILL (7714)
3. GOLL (7709)
4. BOO (0.08)
5. GLEE (3379)

p. 28 Treasure Hunt

1. GO (0.9)
2. ISLE, LOO (3751, 0.07)
3. BELL (7738)
4. IGLOOS (500791
5. hOE (304)
6. GOBI (1809)
7. hILL (7714)
8. BOG (908)
9. OhIO (0.140)
10. OIL (710)

p. 29 What's Cooking?

Cookies
3 cups sugar
3 eggs
2 cups butter
6 3/4 cups flour
2 1/4 tsp. baking powder
2 1/4 tsp. vanilla
3/4 tsp. salt

Chicken

2 chicken breasts
12 tbsp. oil
20 eggs
12 cups rice
1 cup bean sprouts
4 small onions
3 tsp. soy sauce
1/2 tsp. pepper
2 tsp. salt

p. 30 Terrifying Travels

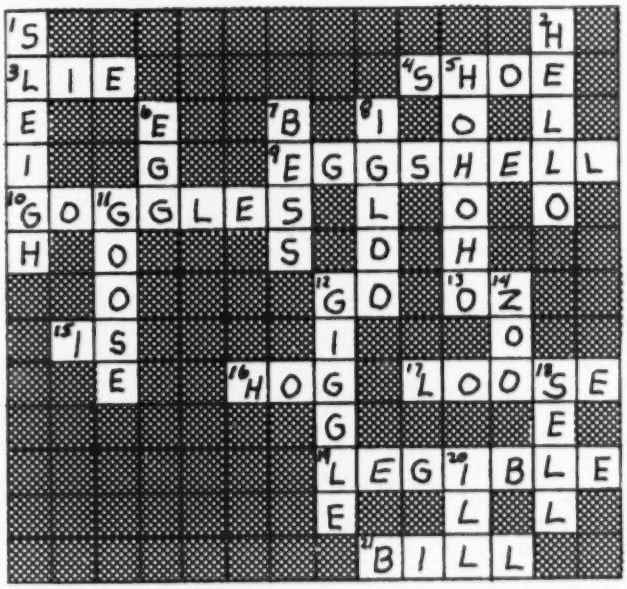
Route 1: 75 miles Route 2: 53 miles

p. 32 Factor Mazes

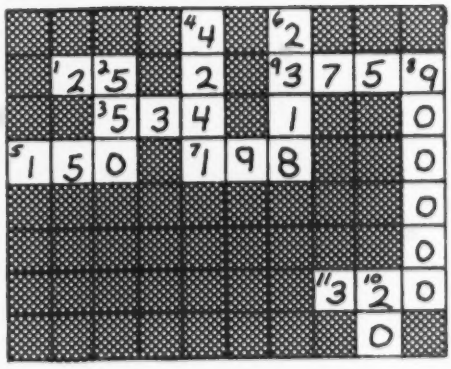
(6's) 78, 330, 270, 582, 426, 282, 378, 210, 534, 678, 144, 1506, 1938, 174, 498, 1194, 258, 1338, 462, 2778

(4's) 52, 100, 388, 284, 1004, 1292, 144, 628, 172, 892, 140, 308, 1852, 796, 332, 116, 1296, 356, 188, 452

p. 38 Kalculator Kode Krosswords


1S 2H
3L I E 4S 5H O E
E 6E 7B 8I O L
I G 9E G G S H E L L
10G O 11G G L E S L O O
H O S O H
O 12G O 13O 14Z
15I S I O
E 16H O G 17L O O 18S E
G E
19L E G 20I B L E
E L L
21B I L L

p. 40 Dinosaur Daze



p. 41 In Days of the Dinosaur

1. 82 2. 45 3. 18
4. 3 5. 80 6. 27
7. 9 8. 70 9. 87

p. 43 The Roman Legions

1. approximately 18 B.C. (answer will vary each year)
2. 64,204,800 cu. ft.
3. 699,000 infantry and 69,900 cavalry
4. 50 ft.
5. 6 ft.

p. 45 Mysteries of the Nile

1. 5,016,000 tons
2. 5,600 square miles
3. 99 ft.
4. 15,464 square miles
5. 9,085 ft.
6. 1319 years and 200 years
7. approximately 2732 years (answer will vary each year)

p. 47 Viking Voyages

1. 1142 years (answer will vary each year)
2. 29 years
3. 800 square ft.
4. 125 years
5. 160 years

p. 48 Sports Now and Then

1. 29 feet 2 1/2 inches
2. .225
3. $121,533
4. 50.3625 points per game

p. 50 Kalculator Kicking

Game Plan I.	17.3	17.8	18.3	18.8	19.3	19.8	
Game Plan II.	367	124	43	16	7	4	3
Game Plan III.	16	24	36	54	81		

p. 51 Out-of-This-World Math

Mission Heat Wave: 2,592,000 miles
Mission Hot Potato: about 21 times
Mission Solar Energy: 600 hrs.
Mission Orion: 346,000,000 miles

p. 53 Echo and Telstar--Communication Satellites

1. 30,807 miles
2. 11 minutes
3. 3373 1/3 miles
4. 18,000 mph

p. 54 Facts and Firsts

1. 29 years
2. 84 times
3. 126 years
4. 7 tons
5. 71 years
6. 441 years
7. 10,405

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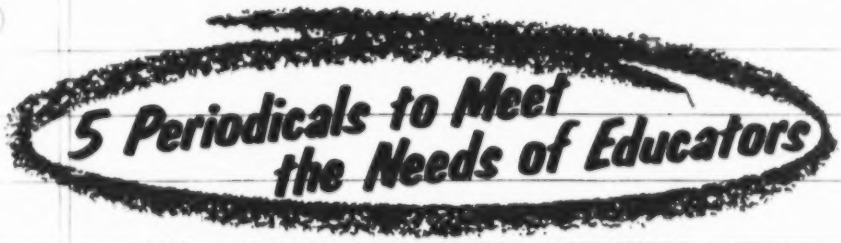

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